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Cash Flow in Financial Analysis and Its Implications.

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CASH FLOW IN FINANCIAL ANALYSIS AND ITS IMPLICATIONS

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ABSTRACT

Over the years accountants have developed basic postulates and principles which aid in a more objective determination of income. Even though advances have been made in the determination of operating results, some users of financial data have considered it necessary to "make adjustments" to periodic income as presented by accountants in income statements. A particular type of adjustment to reported income by one group, security analysts, is the basis for this study.

Some security analysts have in recent years turned to "cash flow" earnings as a substitute for or supplement to net income as a gauge of enterprise progress. Cash flow is determined by adding non-cash for the period to net income. It is contended that a better comparison of operating results is possible when cash flow is the basis for comparison. Some analysts contend that depreciation, depletion and amortization are not operating costs and, therefore, should not be deducted from revenues.

The primary purposes of this study were to investigate the uses and limitations of the cash flow concept in financial analysis, to reveal the ways in which cash flow data have

been presented in corporate annual reports and to determine the desirability of such presentations.

The approach to the problem of uses and limitations of cash flow was analytical, and corporate reporting practices with respect to cash flow were revealed by a review of recent annual reports.

After indicating some basic concepts and assumptions which underlie accounting income determination, the timing of recognition of revenues and expenses is considered. Next, the cash flow concept as a general tool of financial analysis is critically analyzed. Subsequently, the specific applications of cash flow in judging the desirability of an investment in common stock are considered. Finally, consideration is given to the methods used to display cash flow information in annual reports and the desirability of such presentations.

The major conclusion with regard to the uses and limitations of cash flow in financial analysis is that cash flow should not be used as a substitute for properly determined net income but may be appropriately employed as a supplement to net income. Although there may be some disagreement as to the proper amount, non-cash charges are as much a cost

of operations as those items for which cash expenditures are made more or less regularly. Therefore, some amount of deduction for non-cash charges is called for. Net income does not, however, reveal the working capital produced by operations, which is a significant figure in financial analysis. Cash flow might also appropriately be employed as a tool upon which projections of probable future dividends are based.

The major conclusion with respect to the presentation of cash flow data in annual reports is that cash flow data is a proper part of such reports since cash flow reveals information not readily apparent in either the income statement or balance sheet. Most of the reports reviewed, however, did not contain sufficient information to reveal the significance of cash flow.

In view of the widespread misuse of cash flow in financial analysis, accountants should assume the responsibility for properly presenting cash flow data. Accountants could meet this responsibility by making cash flow a part of the funds statement and by explaining the significance of cash flow within the funds statement or in notes thereto.

CHAPTER I

INTRODUCTION

Accounting is said to be the "language of business." The widespread growth of the corporate form of organization and the increased participation of government in the affairs of business have magnified the need for reliable accounting methods and techniques of reporting. These factors have also meant that individuals other than owners and creditors are interested in the financial position and progress of business units. Many other groups have a vested interest in such matters.

A list of those interested in financial data includes management, present and potential stockholders, present and potential creditors, labor unions, financial analysts and governmental bodies. In view of the large number of users of financial data and the fact that each group has aspirations which are different from, and possibly in opposition to, those of other groups, it is not difficult to see why general purpose financial statements may not be completely satisfactory to any one group.

In attempting to keep pace with the growth of business in the past century and to satisfy the demand for more useful information, the primary emphasis of financial accounting has shifted from the presentation of assets and liabilities--the balance sheet--to the proper determination and presentation of the results of operations--the income statement. Although many postulates and principles have been developed which aid in the determination of an objectively measured periodic income, many users of financial data feel a need to "make adjustments" to the financial statements as traditionally prepared and presented by accountants.

Accountants generally agree that the accrual basis of accounting, under which revenues are recognized when they are earned regardless of when the cash is collected and expenses are recognized when they are incurred regardless of when payment is made, is the only proper way to objectively measure financial position and results of operations. However, some users of financial information, especially security analysts, have increasingly in the past few years turned to "cash flow" earnings as a substitute for, or at least a supplement to, net income as determined by the accrual basis of accounting. Many accountants have also included some information and analyses related to "cash flow" in

published financial statements.

What Is "Cash Flow?"

"Cash flow," as the term is now most commonly used in financial analysis, and as the term will be used in the remainder of this study unless otherwise indicated, means net income as determined by accrual accounting plus any depreciation, depletion and amortization charged against revenues in the current period. A somewhat more sophisticated approach used to develop "cash flow" produces a figure which corresponds very closely to "funds provided by operations" in the statement of source and application of funds. When this approach is followed, the term is defined as net income plus any items of expense that did not require the expenditure of cash in the current period, minus any revenues recognized as being earned which were not realized in cash in the current period.

The foregoing definitions are by no means the only ones given to the term "cash flow." As pointed out by Perry Mason, the term has been used in a variety of ways in recent years and was seldom used prior to 1950. The various ways in which the term has been employed include: (1) in the source and application of funds statement to designate the funds provided by operations; (2) in annual reports of

corporations as the designation for an amount which included net income plus and/or minus one or more recorded transactions that did not involve the receipt or expenditure of cash in the current period; (3) as the title for the traditional cash flow statement; (4) in discussions relating to capital budgeting; (5) in discussions of cash budgeting; and (6) in literature pertaining to the effective use of cash.[1]

Adding to the confusion of the various meanings given to the term "cash flow" and the variety of situations in which it is employed is the fact that other terms are used to designate the same concept. Other terms which have been used for this concept include: (1) cash throw-off; (2) internally generated cash; (3) cash earnings; (4) cash income; (5) net cash income; (6) net cash generation; (7) cash funds generated from operations; (8) cash flow earnings; and (9) corporate generated funds.[2] The abundance of terms used to signify the same concept and the variety of uses to which the term "cash flow" is put has contributed to the misunder-

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[1]Perry Mason, "Cash Flow" Analysis and the Funds Statement, Accounting Research Study No. 2, American Institute of Certified Public Accountants, 1961, p. 3.

[2]Ibid.

standing and controversy that currently exists concerning the use of "cash flow" data in financial analysis.

Current Controversy Over the Use of Cash Flow in Financial Analysis

There is currently a great deal of conflict over the use and usefulness of the cash flow concept in financial analysis. Some writers, especially some financial analysts, claim that this is the most important innovation since double-entry bookkeeping, while others contend that the concept is worse than useless.

Proponents of the cash flow concept support their position by pointing to the deficiencies and inadequacies of published financial statements. They contend that the financial statements lack comparability as between different companies in the same industry for the same period; and, sometimes, even for the same company for different periods. This lack of comparability is said to result from the wide variety of procedures available to accountants in the application of generally accepted accounting principles, especially with respect to non-cash revenues and expenses. The non-cash expences referred to include such items as depreciation, depletion, amortization and dry-hole costs;

and, the non-cash revenues are those revenues recognized as being earned in the current period that were received in a prior period.

It is argued that by eliminating these non-cash items, which can be handled differently in similar situations, a more valid comparison can be made of the operating results of the various companies. For example, if one company consistently follows the policy of capitalizing certain material expenditures while another similar company charges such expenditures against current revenue, it makes a meaningful comparison of the operating results of the two companies difficult, if not impossible. Since the traditional financial statements reflect such wide divergencies in the treatment of non-cash items, it is contended that the complete elimination of these factors places the results of operations of the companies being considered on a more comparable basis.

Pointing to the rapid rate of technological change and the growth that has been experienced by companies in the past few years, W. B. McFarland states that cash flow has become a significant tool of financial analysis in the following terms:

> Under such conditions, management and prospective suppliers of capital alike have

> sought more pertinent information to guide their decisions. And the periodic rate of cash flow has gained recognition as a significant index of management's ability to generate funds from its current operations for investment, for debt repayment, and for dividends.[3]

In explaining the increased emphasis on cash flow earnings, John W. Gilbert writes:

> Funds generated by net income, depreciation provisions, and other non-cash charges can be used for a variety of purposes. They can permit higher dividend payments to stockholders; they can be used for the acquisition of new plant or business without resorting to outside financing. Some corporations use these surplus funds for redeeming their own stock, either to increase the equity of remaining shareholders or to have the shares available as barter for new acquisitions.[4]

Certainly, not all security analysts support the cash flow concept nor do all accountants feel that its usefulness is nil, but the credit for the development of the concept is given to security analysts. Opponents argue that cash flow should not be considered a substitute for or an improvement upon accrual net income in measuring the results of operations

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[3]W. B. McFarland, "Review of Funds Flow Analysis," Harvard Business Review, XLI (September, 1963), 162.

[4]John W. Gilbert, "Use of Corporate-Generated Funds for Expansion," Taxes, XLII (January, 1964), 50.

and the effect of such operations on financial position; and, it is also contended that cash flow data should not be presented in any manner which would tend to detract from the significance of reported net income. For example, opponents object to the computation of cash flow earnings per share in judging the desirability of an investment, a high cash flow per share offsetting a low net income per share figure.

There is no question that the cash flow concept is a challenge to current accounting principles. One accountant, William A. Paton, in discussing the misconceptions and errors involved in the cash flow concept, expresses his discontent as follows:

> ...there is some justification for additional efforts to encourage straight thinking and clear description in this area. And some of the recent developments in corporate reporting indicate that accountants themselves need both sharpening up on fundamentals and encouragement to stand their ground on the "cash flow" issue.[5]

After discussing some of the fallacies involved, Paton continues by stating:

> It clearly follows that there is no rhyme or reason in a calculation consisting of computed

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[5]William A. Paton, "The 'Cash Flow' Illusion," The Accounting Review, XXXVIII, (April, 1963), 244.

> net income plus the amount of the depreciation charge included in the deductions recognized in determining such income, either as a supplement to or a substitute for a showing of net earnings... If there is any connection in which such a calculation is generally useful--which I'm inclined to doubt--it is not to be found in the area of income measurement.[6]

In view of the divergence of opinion that exists concerning cash flow between users of financial data; and, even among the accountants who prepare financial statements, further investigation and analysis of the cash flow concept is desirable.

Purpose and Scope of Study

Accounting has developed to its present state through an evolutionary process, and it is understandable why accountants who have played a role in this development would object to a concept which seems to be in direct contradiction to the guideposts which have withstood the test of time. New ideas should not be abandoned simply because they are new, nor should they be accepted without question. If the new concept is more valid than the old, then it should be retained and the old discarded. Or, if the new concept adds to the usefulness of the old, both should be retained and used.

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[6] Ibid., p. 246.

The purpose of this study is to investigate the assumptions underlying the cash flow concept and to determine its uses and limitations. Included in this study will be a review of the ways in which cash flow data have been presented in annual financial statements, and an attempt will be made to isolate those financial accounting principles which the cash flow concept seems to violate.

Is the cash flow concept valid as a substitute for or a supplement to reported earnings on an accrual basis? Do cash flow earnings actually reveal the amount of cash available for financing expansion, paying dividends, etc.? Do cash flow earnings give more comparability between similar companies in the same industry and/or for the same company for different periods than the traditional income statement? What, if anything, is so different about the non-cash expenses that they should receive special treatment? These are some of the questions which this study hopes to answer.

CHAPTER II

INCOME DETERMINATION--A BASIC ACCOUNTING PROBLEM

The cash flow concept was developed as a result of doubts that exist with respect to net income as ordinarily reported. Is it possible that periodic income is being superseded as a yardstick used in judging the progress of a firm over a period of time? One writer, David Solomons, suggests that such a possibility exists. After stating that net income was not really very useful for any of the purposes for which it is computed--taxation, determination of corporate dividend policy and as a guide for investment policy--Solomons makes the following comments with regard to the stability of the income statement as a report on how well management has discharged its stewardship:

> Even for reporting to stockholders, just as in the first half of this century we saw the income statement displace the balance sheet in importance, so we may now be de-emphasizing the income statement in favor of a statement of fund flows or cash flows. Each of us sees the future differently, no doubt. But my own guess is that, so far as the history of accounting is concerned, the next twenty-five years may subsequently be seen to have been the twilight

of income measurement.[1]

The accounting concept of income has been under attack since income determination became one of the most important functions of financial accounting. Many feel that the cash flow concept was developed by security analysts with the idea of selling more securities rather than making a sincere attempt at improving the measurement of enterprise progress. At any rate, cash flow certainly is a direct attack on the accountants' concept of income. Which provides the better indicator of results of operations, accounting income measurement or cash flow? In order to answer this question it is necessary to look closely at the assumptions and concepts underlying the accounting determination of income and the differences that exist between this determination and cash flow. Since cash flow is computed by adding items to and subtracting items from accounting net income, the accounting determination of net income will be explored in this chapter and cash flow will be analyzed in the following chapter.

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[1]David Solomons, "Economic and Accounting Concepts of Income," The Accounting Review, XXXVI, (July, 1961), 383.

Concepts and Assumptions Underlying Accounting Income Determination

Before analyzing the computation of income some of the basic concepts and assumptions which provide the framework for such computation will be summarized.

The Business Entity

The business entity is one of the most basic of accounting concepts, and it assumes the collection of information pertaining to individual business units to be the most meaningful. In accounting, therefore, financial data are collected for each entity, without regard to the suppliers of capital, whether this entity be a sole proprietorship, partnership, or corporation. This idea has been expressed as follows:

> A business entity is a formal or informal unit of enterprise--a collection of economic goods and services and a group of persons--organized to accomplish certain express or implied purposes. The activities of such an entity are usually oriented toward profit objectives and, in broad outline, involve the acquisition of goods and services, the transformation of these acquisitions, and the delivery of the resultant outputs to the market. Accounting procedures and financial reports are concerned with specific business

entities and their activities.[2]

Continuity of Existence

Financial accounting also assumes enterprise continuity--that is, it assumes that the particular entity under consideration will remain in operation indefinitely. This is generally referred to as the "going concern" concept, and the traditional financial statements are valid only so long as this assumption can be made. For example, a "statement of affairs" rather than a traditional income statement and balance sheet is prepared for a concern if liquidation is imminent. Paton and Littleton discuss this concept by stating:

> The concept of continuity of operation is justified on the basis of typical experience. The application of this concept to a particular concern is of course a matter of assumption and this fact should never be lost to sight in the process of business reporting.[3]

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[2]American Accounting Association, Accounting And Reporting Standards For Corporate Financial Statements, 1957 Revision, p. 2.

[3]William A. Paton, and A. C. Littleton, An Introduction To Corporate Accounting Standards, American Accounting Association, 1940, p. 22.

Common Denominator for Transactions

The monetary unit, the dollar in the United States, is the common denominator into which enterprise transactions are translated. Summaries and comparisons of dissimilar events are made possible through the use of this common denominator. All financial accounting reports are stated in terms of this measuring stick, the unit of account. Accounting assumes that the unit of account, the dollar, remains constant in terms of purchasing power and gives no recognition in the accounts for fluctuations in the value of the dollar. Paton and Littleton give their views on the stable dollar assumption as follows:

> The assumption that recorded dollar cost continues to represent actual cost permeates accounting thought and practice, as it does the law. Accounting, in other words, assumes a stable measuring unit. In periods of major price movements this assumption is clearly invalid for certain purposes, ... Undoubtedly interpretative accounting faces a challenge at this point.[4]

The Period Concept

It is widely recognized that income can be determined

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[4]Ibid., p. 23.

precisely only at the end of an entity's life, but interested parties want to know the current status and results of an entity's operations periodically. The need for "test readings" during the life of a business unit has forced a choice between less accurate reports for shorter periods and more accurate reports covering longer periods of time. The necessity of preparing accounting reports for intervals of time shorter than the life of a business is referred to as the "period concept." In explaining the period concept, Paton and Littleton comment:

> For typical trading and manufacturing establishments, and for most other lines, the period is clearly superior--from the standpoint of expediency--to the physical unit of output or particular lot or order, as the focus of expense and revenue accounting... Moreover, the limitations of yearly measurements as gauges of progress for the continuing enterprise should not be overlooked; such measurements are always tentative and conditional to some extent.[5]

Consistency

In view of the variety of procedures which may be applied, all within the framework of accepted principles of accounting, it is necessary that once a particular procedure

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[5]Ibid., p. 22.

is adopted that it be followed consistently if comparability of the financial statements of a particular enterprise is to be maintained. This concept applies, of course, to individual entities and does not mean that once a particular procedure has been adopted it should never be changed. Procedures may be changed to meet changing conditions and if more informative statements will result. If a change in procedure is made, the financial statements in the period in which the change is made should disclose the nature of the change and its effects so that comparability may be maintained between current and preceeding statements.

Objective, Verifiable Evidence

In so far as is possible, accounting attempts to present information which is completely objective and verifiable. As the period concept suggests, it is not possible to be completely objective about all of the financial data presented. Depreciation is a case in point since a completely objective determination of depreciation is not possible until the end of an asset's life.

Full Disclosure

As mentioned in the first chapter, a large number of

groups rely on accounting information. To some users of financial data the accounting statements are their only source of information as to the financial progress and position of an entity. Therefore, the accounting statements must contain sufficient facts to enable readers to acquire informed opinions. The necessity for full disclosure is emphasized by the American Institute of Certified Public Accountants in their Rules of Professional Conduct. Rule five states:

> In expressing an opinion on representations in financial statements which he has examined, a member may be held guilty of an act discreditable to the profession if he fails to disclose a material fact known to him which is not disclosed in the financial statements but disclosure of which is necessary to make the financial statements not misleading...[6]

Some of the basic concepts underlying the determination of accounting income have been presented. There are objections to each of the concepts enumerated, but the purpose of this study is not to disclose all such arguments. These conflicts will be reviewed only insofar as they pertain to cash flow analysis. An explanation of how accounting income is

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[6]American Institute of Certified Public Accountants, Rules of Professional Conduct, (1958), Rule 5.

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[6]American Institute of Certified Public Accountants, Rules of Professional Conduct, (1958), Rule 5.

determined within the basic framework of the assumptions will be presented next.

Timing of Recognition of Revenues and Expired Costs

Operating within the frame of reference just discussed, the accountant determines income by matching against revenues for the period under consideration the related costs which have expired in producing such revenues. This matching process is considered to be an attempt to match effort (expired costs) and accomplishment (revenues).

Revenue Defined

Revenue is the inflow of assets, or the cancellation of liabilities, resulting from the sale of goods or the rendering of services. As used in accounting, the term also includes any other increases in the owners' equity with the exceptions of capital contributions and capital adjustments. This definition of revenue follows rather closely the meaning given to the term by the American Institute of Certified Public Accountants:

> Revenue results from the sale of goods and the rendering of services and is measured by the charge made to customers, clients, or tenants for goods and services furnished them.

> It also includes gains from the sale or exchange of assets (other than stock in trade), interest and dividends earned on investments, and other increases in the owners' equity except those arising from capital contributions and capital adjustments.[7]

Cost Defined

Cost, as the term is used in accounting, is the consideration given for goods and services. Those costs which will be of no benefit to future operations are said to be expired or used up. Those costs which will benefit the business unit in the future are said to be unexpired. The Committee on Terminology of the American Institute of Certified Public Accountants defines cost as follows:

> Cost is the amount, measured in money, of cash expended or other property transferred, capital stock issued, services performed, or a liability incurred, in consideration of goods or services received or to be received. Costs can be classified as unexpired or expired. Unexpired costs (assets) are those which are applicable to the production of future revenues. ... Expired costs are those which are not applicable to the production of future revenues, and for that reason are treated as deductions

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[7]American Institute of Certified Public Accountants--Committee on Terminology, Accounting Terminology Bulletins, No. 2, (March, 1955), p. 2.

> from current revenues or are charged against retained earnings.[8]

The Matching Process

Because of the period concept, the determination of the results of operations is a somewhat more difficult task than the preceeding paragraphs may tend to suggest. The problem is, what costs are matched against what revenues? Transactions of a business unit do not start and stop with the beginning and end of the hypothetical accounting period, which is only one installment in the history of the life of the enterprise.

What criteria are used to determine when revenues are to be recognized as earned and when costs expire? There is general agreement that the earnings of a business unit cannot be ascribed to any particular subdivision--that is, earnings result from the entire business activity. Because of the need for objectivity, however, the point of sale is used by those enterprises which offer a tangible product to customers; and, service providing entities recognize revenue

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[8]American Institute of Certified Public Accountants--Committee on Terminology, Accounting Terminology Bulletins, No. 3, (July, 1957), pp. 1-2.

when the services are performed. Although revenue is earned throughout the productive process, the difficulty of measuring and recognizing revenue at various stages of this productive activity lends support to the accounting concept of realization. In order for a revenue item to be realized, there must be a transfer of title, or its equivalent, and a validation of the transaction by the acquisition of liquid assets. In explaining how both of these requirements are met, Paton and Littleton state:

> For the great majority of business enterprises the sale basis of measuring revenue clearly meets the requirements of accounting standards more effectively than any other possible basis. Revenue is the financial expression of the product of business operation and hence should be gauged in terms of the decisive stage or step in the stream of activity. Revenue, moreover, should be evidenced and supported by new and dependable assets, preferably cash or near cash.[9]

The task of matching costs against revenues, as implied by the definition of cost previously stated, is a matter of deciding which costs have expired as a result of producing the revenue recognized in a particular period and which costs have future service potential and are therefore chargeable against future revenues. The factors to be

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[9]William A. Paton and A. C. Littleton, op. cit., p. 49.

considered in deciding whether to defer costs or to charge them to current operations have been described as follows:

> First, does the charge in question represent a bona-fide cost, an expenditure reasonably justified under all the circumstances? If the answer is in the affirmative the charge cannot well be treated as a loss, although it may still be a current deduction. Second, does the charge represent a factor from which a future benefit or contribution can reasonably be anticipated? That is, is the charge intrinsically associated with future revenues? If the answer is again in the affirmative the cost under consideration may properly be deferred.[10]

Simons and Karrenbrock summarize very well the timing involved in the recognition of revenues and expenses:

> Revenue is recognized for accounting purposes when a sale of goods is made or when services are performed for customers... Cost expiration is recognized when an asset is consumed, as in the sale of merchandise and the payment of rent; when there is a decline in the economic utility represented by an asset, as in the wear and tear of equipment through use or its loss by fire; and when there is the emergence of a liability, as in the case of the accrual of salaries and the issue of product guarantees.[11]

Revenues and expenses are not assigned to periods

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[10] Ibid., pp. 73-74.

[11] Harry Simons and W. E. Karrenbrock, Intermediate Accounting, Comprehensive Volume, 4th ed., (Cincinnati, Ohio: South-Western Publishing Company, 1964), p. 32.

independently of each other. Either revenue or expense must be decided upon as the controlling factor and allocated first. Accountants have generally chosen revenue as the controlling element and allocated it to periods and then costs are allocated based on the revenues. Thus, as indicated by the preceeding discussion, revenue for a particular period is determined first and then those costs associated with such revenue are deducted in order to determine the income for the period.

This chapter has attempted to summarize some of the basic concepts and assumptions which underlie the determination of accounting income and a review of the timing and recognition of revenues and expired costs. Since the cash flow concept is an attack on the accountant's determination of income, this review was necessary before attempting to investigate the cash flow concept.

Using the frame of reference provided by this chapter, the study continues by critically analyzing the cash flow concept.

CHAPTER III

THE CASH FLOW CONCEPT ANALYZED

The previous chapter presented the background for the analysis of the cash flow concept which will be the task of this chapter. As already indicated, the basic difference between traditional net income and cash flow earnings lies in the area of non-cash expenses--that is, those costs which were recognized as having expired which did not require an actual outlay of cash during the period. Since depreciation is the non-cash charge common to most business units and because this is the item most often added to accounting net income to determine cash flow, depreciation is the non-cash expense on which primary emphasis will be placed in this study; but, most of the analysis will apply equally as well to other non-cash charges such as depletion and amortization. The differences between depreciation, depletion and amortization will also be mentioned.

Cash Versus Non-Cash Charges To Operations

It should be pointed out that the cash flow concept is not an attempt to measure income on a cash basis--where

revenues are recognized when the cash is received for services performed or goods transferred and expenses recognized only when cash is paid. The difference between traditional depreciation accounting and cash flow is not one of timing either since there would never be a deduction for plant and equipment costs in the determination of cash flow. This implies that depreciation and other non-cash items are improper deductions from revenue in measuring the progress of a particular entity. The following is typical of statements being made in support of cash flow as a yardstick to be used in judging enterprise progress:

> Recession played hob with corporate profits last year. But it had little effect on industry's working income--its cash flow.... But one thing did not fall: industry's real working income, its all important cash flow (net income plus depreciation, depletion and amortization). Thanks to a rising tide of depreciation, a sort of second income, industry's total cash flow remained remarkably steady...[1]

This same idea has also been expressed as follows:

> One of the few truly encouraging aspects in the somewhat drab economic picture is the fact that corporations are actually taking in a great deal more money than shows up in their abbreviated income statements. In fact, the spotty and sometimes disappointing net income record of the

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[1]"Second Income," Forbes, LXXXVII (February 1, 1961), 16.

> entire past decade takes on a decidedly brighter hue when one looks closely at corporate cash earnings rather than just the net earnings as reported in the financial press.[2]

Are non-cash expenses proper deductions from revenue in determining the results of operations for a particular period? In order to answer this question it will be necessary to look closely at the accounting concepts underlying the treatment of the non-cash items, especially depreciation.

Depreciation Accounting

The American Institute of Certified Public Accountants defines depreciation and depreciation accounting as follows:

> Depreciation accounting is a system of accounting which aims to distribute the cost or other basic value of tangible capital assets, less salvage (if any), over the estimated useful life of the unit (which may be a group of assets) in a systematic and rational manner. It is a process of allocation, not of valuation. Depreciation for the year is the portion of the total charge under such a system that is allocated to the year. Although the allocation may properly take into account occurrences during the year, it is not intended to be a

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[2]Ward Gates, "Important Industrial Companies: Where Cash Flow Profits Greatly Enhance Earnings Picture," Magazine of Wall Street, CVII, (September 24, 1960), 11.

> measurement of the effect of all such occurrences.[3]

The term depreciation is given a very narrow meaning in accounting. As used in accounting, depreciation means the systematic allocation of the cost of tangible assets to those periods benefited by asset use. The term depletion is employed in accounting to mean the charge to operations for the using up of natural resources,and the allocation to periods of the cost of intangible assets is known as amortization. Thus, all three of these terms designate similar accounting concepts, the distinction being the type of asset to which each applies. The distinction between depreciation and amortization is that while depreciation is applied to the allocation of the cost of long-lived, tangible assets used in the business, amortization is applied to similar charges relating to intangible assets. The distinction between depreciation and depletion has been clearly drawn as follows:

> 1. Depletion is recognition of the quantitative exhaustion taking place in a natural resource, while depreciation is the recognition of the service exhaustion taking place in a plant and equipment item.

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[3]American Institute of Certified Public Accountants--Committee on Terminology, Accounting Terminology Bulletins--Review and Resume, No. 1, (New York, 1953), p. 25.

> 2. Related to (1), depletion is recognized as the cost of the material that becomes directly embodied in the product of the company; through depreciation, the cost of an asset may be allocated to production but the asset itself does not become a part of the finished product.
> 3. Depletion involves a distinctive asset that cannot be directly replaced in kind upon its exhaustion; depreciation involves an asset that is generally replaced upon its exhaustion.[4]

The accounting treatment of intangible asset cost is very similar to that given tangible assets. The American Institute of Certified Public Accountants has presented the following classification of intangibles:

> 1. Those having a term of existence limited by law, regulation, or agreement, or by their nature...
> 2. Those having no such limited term of existence and as to which there is, at the time of acquisition, no indication of limited life...[5]

The intangibles with which this study is concerned are type (1) intangibles since, by definition, the cost of these assets should be charged to the periods benefited, whereas, type (2) intangibles are permanent in nature and need not be amortized unless factors bring about a change such that type (2) intangibles are converted into type (1).

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[4]Simons and Karrenbrock, op. cit., p. 461.

[5]American Institute of Certified Public Accountants--Committee on Accounting Procedure, Accounting Research Bulletins, No. 43, (New York, 1953), p. 37.

The necessity for the allocation of the cost of long-lived assets arises because of the desire for periodic checks on the financial progress of a firm and the fact that these fiscal periods do not coincide with the expiration of service lives of the assets used in production. If test readings were not desired at intervals during the life of an enterprise it would be relatively simple to determine the amount which should be charged to operations for the use of a particular asset upon the expiration of its useful life. As a practical matter, however, depreciation must be considered because information on operating results is needed at regular stages in the life of an enterprise and because the life histories of the various assets extend over a number of accounting periods.

Depreciation is caused by certain physical and functional factors. The physical factors which place a limit on the economic life of an asset include wear and tear, deterioration and decay, and damage and destruction. The functional factors that limit the period of time for which an asset is useful are inadequacy and obsolescence.

Wear and tear result from the use of an asset in business operations and ordinarily has an important effect on service life. The action of time and the elements causes

deterioration and decay even though an asset is not in actual use. Damage and destruction are not subject to forecast with the same degree of certainty as are the other physical factors and is caused by such events as fires, floods, earthquakes and lightning. As H. R. Hatfield so aptly described it, "all machinery is on an irresistable march to the junk heap, and its progress, while it may be delayed, cannot be prevented by repairs."[6] Nothing has yet been devised that can prevent the ultimate extinction of asset usefulness, and it is this extinction in usefulness which depreciation attempts to recognize.

With the frame of reference provided by what depreciation accounting entails a close look at why cash flow enthusiasts consider depreciation and other non-cash expenses to be improper deductions from revenue can be taken and a decision made as to whether such views are appropriate.

Depreciation as a Non-Cash Cost

The most frequently pointed to difference between depreciation, as well as other non-cash costs, and other

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[6]H. R. Hatfield, Accounting--Its Principles and Problems, (New York: D. Appleton and Company, 1927), p. 130.

expenses is the fact that they are non-cash--that is, these costs did not require an outlay of cash in the period in which they were taken as deductions from revenue. However, the big problem here is that those who support the cash flow concept seem to forget that at one time or another plant and equipment must be paid for just as any other cost. Some examples of the mistaken notion that plant and equipment costs are truly non-cash in the sense that expenditures of cash are never required follow:

> The New York Stock Exchange asked more companies whose stocks are listed on the exchange to expand their financial reporting to include data on "cash flow"--net income plus internally-generated funds. Internally generated funds include charges against income for depreciation and depletion of assets, and they aren't paid out, thereby increasing a company's actual cash.[7]

> For investors seeking to analyze cash flow and its significance, the simplest approach is to view cash earnings as the total earnings a corporation actually generates from its operations.[8]

It should be obvious that cash must be expended for plant and equipment items; although, the entire amount

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[7]"Big Board Asks More Listed Firms to Give Their 'Cash Flow' Data," The Wall Street Journal, (February 17, 1964), p. 1.

[8]Gates, op. cit., p. 12.

taken as depreciation in any one period is not necessarily related to the amount of cash expended on long-lived, tangible assets in the same period. It is quite possible that the depreciation in any period may relate to cash expenditures that will be made in future periods, that were made in past periods, and to cash expenditures made in the current period. In discussing the idea that depreciation is not a true cash cost, Paton comments:

> The truth is, of course, that depreciable property doesn't grow on the bushes or fall like manna from heaven. Typically such assets are acquired by the process of construction or purchase, and sooner or later actual disbursements of cash--via checks on bank accounts--are required to meet the costs incurred. And the periodic depreciation charge typically represents a slice of the expenditures made to acquire the building and equipment--a slice designed to measure the capacity to render service that is currently consumed or exhausted.[9]

Of course, it is possible to recognize revenues and expenses on a cash basis, but it is generally agreed that the use of cash basis accounting provides meaningful results only when the assets and liabilities of an entity are relatively unchanged as between the beginning and end of

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[9]William A. Paton, "The 'Cash Flow' Illusion," Accounting Review, XXXVIII, (April, 1963), 244-245.

the period. If the tracing of cash outlay is desired so that such outlays may be matched against revenues, it would be necessary to trace expenditures made for many other items in addition to depreciation which are deducted from revenues currently under the accrual accounting concept regardless of when cash expenditures are made. In fact, most of the costs deducted from revenues on the income statement would have to be radically revised if a tracing of cash outlay is desired. The amount deducted as "cost of goods sold" in the income statement, for example, normally includes production or merchandise inventory costs which are represented by cash expenditures made previously, during the current period, and some which have not yet been made. For that matter, "cost of goods sold" for a manufacturing concern includes, among other things, depreciation that was allocated to the product sold.

Most other costs have this same relationship as far as the timing of cash expenditure is concerned and when these items are recognized as being expired costs under traditional accounting methods. Moreover, the same reasoning can be applied for not deducting "cost of goods sold" and most other costs as is applied to depreciation in the determination of cash flow, but it is clear that if all such costs were

omitted from the determination of income the results obtained would be meaningless. Blough expresses this point of view in these terms:

> While it is true that in any one accounting period the depreciation charge for a particular asset does not represent an outward cash flow, there was a payment of cash or its equivalent in the period in which the asset was acquired. Under the cash flow earnings concept, there would be no charge to operations in the period in which the asset was acquired, nor in any other period, which certainly would result in a misleading presentation of the earning power of the corporation over the life of the asset.[10]

As mentioned in the preceeding quotation, "cash or its equivalent" is given in exchange for an asset when it is acquired. Cash equivalent refers to other items which are accepted in lieu of cash for facilities. This would include the creation of liabilities, the issuance of capital stock, and the exchange of assets other than cash.[11] All of these items, in a sense, require that cash be expended. Liabilities, in the final analysis, must be liquidated by the payment of cash. There is only a slight technical

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[10]Carmen G. Blough, "Accounting and Auditing Problems," Journal of Accountancy, CVI (October, 1958), 57.

[11]See definition of cost given in chapter II.

difference between the issuance of capital stock directly for facilities and the less direct method of issuing the stock for cash originally and then paying cash when units of plant and equipment are acquired. In other words, when a corporation exchanges stock for an asset, it does so in view of the alternative of issuing the stock for cash first and then acquiring the asset with the cash obtained from the sale of the stock. Much the same thing can be said of the exchange of assets other than cash for facilities as has been indicated with respect to the direct issuance of capital stock--that is, the opportunity of an intermediate holding of cash is foregone if a direct exchange is decided upon.

Even if there is some difference in the timing of cash outlays for facilities and other costs necessary in the operation of a business, the fact still remains that cash must be expended at one time or the other to acquire such facilities. With such a highly sophisticated and highly developed credit economy, a mere tracing of cash receipts and disbursements would not give a true picture of operating results. For example, a sizeable sale of inventories purchased on account during a period for which payment has not been made would render the comparison of cash receipts

and disbursements ineffective as a tool in judging enterprise effectiveness for the period.

The cash flow concept, as pointed out, does not attempt to match cash receipts and disbursements from operations but merely adds back depreciation and other charges to the net income figure as determined by accrual accounting. The concept gives no recognition to asset and liability position changes, other than those related to non-cash charges, as between the beginning and end of the period; and, therefore, the cash flow concept does not measure income on what is commonly referred to as the cash basis. In order to convert cash flow to cash basis earnings it would be necessary to make adjustments to the cash flow figure so that the changes in asset and liability balances as between the beginning and end of the period brought about by operations, as opposed to capital transactions and borrowings, could be eliminated. To arrive at cash basis earnings it would be necessary to add back decreases in asset accounts, other than cash, and increases in liability accounts; and, increases in asset accounts, other than cash, and decreases in liability accounts would have to be deducted from the cash flow figure.

Lack of Uniformity and Objectivity in the Depreciation Charge

Other reasons given for adding depreciation back to net income are that the determination of depreciation for a period lacks objectivity and that no uniformity exists between companies in the same industry for the same period and for the same company for different periods. These criticisms are more justifiable than that of facilities costs not being true cash costs, but the conclusions reached based on such criticisms are debatable. In voicing these criticisms, Freeman writes:

> In the highly subjective field of accounting one of the least definite of many fluid concepts is that of depreciation.
>
> Accounting treatments may vary from corporation to corporation, from industry to industry, and sometimes, indeed, from report to report.
>
> ...The tendency has become to equate depreciation write-offs with profits, rather than expenses...[12]

As far as the charge of lack of objectivity is concerned, there is necessarily some subjectivity in the computation of the annual depreciation charge. The two areas of depreciation accounting where complete objectivity

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[12]George Freeman, "Depreciation: Too Big to Write Off," Financial Analysts Journal, XIX, (September, 1963), 57.

is not possible are in the determination of useful life and the estimation of the amount that will be recovered as salvage at the end of an asset's life.

The factors which limit the useful life of an asset are difficult to predict precisely, especially inadequacy and obsolescence; and, although some reasonable estimate is possible, the scrap or salvage value of an asset is not subject to precise determination. But even though depreciation is not subject to precise measurement there is no question that the cost of using facilities are just as much a cost of operations ... any of the other costs involved. Accordingly, it is preferable to have an estimate of the consumption of usefulness of facilities rather than make no allowance for the expiration of plant and equipment costs.

The lack of comparability of financial statements between different companies is one of the most disturbing problems of present day accounting, and contributing to this lack of comparability is the non-cash items under discussion. The amount of depreciation, depletion and amortization to be recorded are matters of judgment and estimate. Therefore, substantial differences may exist between two companies as far as the amounts taken for these items are concerned, even though conditions may be such that

the only real difference is that two separate entities exist, each with its own management. It is a matter of management decision as to what the depreciation policy of an entity is to be. Management must decide what the useful lives of the assets used in operations are, what the salvage values will be at the termination of useful lives, and what method is to be used to allocate asset cost to periods.

Notwithstanding the fact that some amount of depreciation is a proper deduction from revenues, it is understandable why the lack of concreteness in the depreciation deduction would cause the users of financial statements some concern. The concern of one group, investors, has been expressed as follows:

> ...At the same time it must be recognized that depreciation is a variable, and it is becoming increasingly difficult, in view of the variety of depreciation methods available to corporations today (not to mention the even greater variety of methods of reporting such depreciation charges to stockholders) to tell at any given moment whether depreciation charges are too high or too low. ...it is becoming increasingly difficult for the investor to determine...where two comparable companies may stand financially.[13]

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[13] A Special Study--The Quality of Earnings, (New York: Merrill Lynch, Pierce, Fenner & Smith, Inc., September, 1963), p. 1.

It also could be possible that lack of uniformity exists due to fundamental differences of the various companies. For example, if there are basic differences--in rate of output, retirement policy, or repair and maintenance policy--between two business units, it would not be expected that depreciation taken by the firms in any one period would be the same. Assuming wear and tear to be the controlling influence, a firm that operates at twice the rate of another of equal size would be expected to record twice as much depreciation. Management's repair and maintenance policy can, of course, have a significant effect on the useful lives of assets. Everything else being equal, the firm with a less adequate policy of facilities upkeep would be expected to record higher depreciation charges since useful lives of assets would be shorter. Finally, if a firm follows a policy of replacing its facilities much sooner than similar businesses, it would need to depreciate its facilities at a faster rate.

Before depreciation differences between companies can be branded as arbitrary, a thorough examination of the characteristics and policies of the companies being considered is necessary. Thus, the meaningful question is not whether any depreciation at all should be taken but whether the depreciation taken represents a reasonable allocation of

cost based on individual company experience.

Many articles in financial journals in recent years have indicated that accountants were understating profits in their annual reports because they included among the other subtractions from revenues a deduction for depreciation which should not be taken as a deduction at all, or if proper, entirely too much depreciation was being taken. Even though there may be some question as to the proper amount of depreciation to be deducted in any one period, the investment in facilities, as well as other costs, must be recouped through revenues if invested capital is to be maintained. Mason explains the necessity of non-cash deductions from revenue as follows:

> ...That portion of the cash flow associated with the accounting for depreciation and similar items is merely part of the cycle of (1) investment in an asset, (2) recovery of the cost from revenue-earning operations (disinvestment), and (3) reinvestment. Unlike the net income, this portion of the cash flow has no effect upon the stockholders' equity or "net worth." Only the net income can properly be compared with the stockholders' investment in arriving at a measure of the success of business operations.[14]

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[14]Perry Mason, "Cash Flow" Analysis and The Funds Statement, Accounting Research Study No. 2, (New York: American Institute of Certified Public Accountants, 1961), p. 39.

Unless an investigation of individual companies reveals that some are depreciating their facilities at too rapid a rate, there is no justification for adding back any part of the depreciation taken. The same thing holds true for other non-cash charges. Any attempt to add net income and non-cash charges and arrive at a meaningful earnings figure is much like trying to add any items which are dissimilar--the result obtained is a mixture of items with no meaning.

Analysis of Data for Individual Companies

In demonstrating that non-cash charges are not similar to net income, an analysis will be made of data for one particular company--Gulf Oil Corporation--which emphasizes cash flow in its annual reports (Table I).

Of course, operating results of Gulf Oil Corporation looks much better when viewed from the cash flow standpoint than when net income is considered to be the gauge of operating results. Does cash flow, in this case, reveal a more valid picture of operating results than net income? In order for depletion, depreciation and amortization charges to be considered equivalent to net income, these items would have to contribute to equity which could be reinvested to

TABLE I
Gulf Oil Corporation Financial Data
For 1959, 1962, and Four Years Ended December 31, 1962
(000's Omitted)

	Four Years Ended December 31, 1962	1962	1959
Gross Operating Income	$11,014,921	$2,836,292	$2,713,009
Depletion, Depr. & Amortization	$ 850,251	$ 250,927	$ 136,145
Net Income	1,299,406	340,091	290,467
Cash Flow	$ 2,149,657	$ 591,018	$ 426,612
Number of shares outstanding	---	104,001	100,120
Total Capital (Including minority interest)	---	$3,416,649	$2,819,872
Net Property	---	$2,458,691	$2,087,563
Dividends Declared	$ 460,686	$ 151,345	$ 96,876

Source: Standard Corporation Descriptions, June-July, 1963, (New York: Standard and Poor's Corporation), pp. 4975-4976.

produce higher revenues and profits in the future or be capable of being distributed as dividends without imparing existing equity.

Over the period indicated by Table I, Gulf's net property increased 12.9 percent as opposed to an increase of 4.5 percent in gross operating income. Gross operating income being much lower than before in relation to net property, gross operating income being 130 percent of net

property in 1959 and 115 percent in 1962, tends to indicate that depletion, depreciation and amortization charges have not been overstated. Other factors, including the acquisition of less efficient properties, could account for the decrease in relative productivity; but, on the other hand, the figures do not indicate excessive non-cash charges.

Gulf Oil Corporation's earnings do not indicate that "hidden reserves" were created by non-cash charges over the four year period. Using book figures for capital and net income as found in its annual reports, there was a 10.0 percent return on capital employed in the business in 1959 and a return of 9.9 percent in 1962. It would be reasonable to expect a larger return on capital employed per books in each succeeding year if excess charges were made for the non-cash items, but such is not the case with Gulf Oil Corporation. Thus, operating results of the company does not indicate that earnings have been understated due to excess non-cash charges.

The Gulf Oil Corporation is, of course, only one example, and it is quite possible that a number of companies are understating profits by overstating non-cash charges. International Business Machines is still renting equipment which has been fully depreciated on its books. If equipment

still in use is fully depreciated, there is no question that past earnings have been understated and that earnings will be overstated in the future while such equipment remains in use.

Another frequently cited example of depreciation being taken too rapidly is the airline industry, which depreciates its jets over a ten to twelve-year period even though the expectations are that the jets will have a much longer useful life.[15] The data in Table II do not indicate

TABLE II
Net Income, Cash Flow and Profitability
Data on Five Major Airlines
For the Years 1958 and 1963

Companies	Net Income (Millions) 1958	Net Income (Millions) 1963	Cash Flow (Millions) 1958	Cash Flow (Millions) 1963	Net Income as a % of Common Equity 1958	Net Income as a % of Common Equity 1963
American	$16	$17	$49	$ 82	10.6	7.5
Eastern	7	(20)	32	24	6.5	()
Pan American	5	34	37	111	3.8	15.1
TWA	(2)	20	28	72	()	18.5
United	14	15	48	92	9.6	5.2

() Indicates net loss.
Source: Forbes, XCIII, (May 15, 1964), 36.

[15] "Cash Flow," Forbes, XCIII, (May 15, 1964), 35-37.

that any such generalization is possible with respect to the airline industry. Variations in profit margins, although there are other explanations possible for such variations, between the various companies for the years 1958 and 1963 make such statements questionable. Percentage return on common equity varied all the way from a net loss in 1958 to a return of 18.5 percent for TWA. Comparing this to Eastern's 6.5 percent return in 1958 and its net loss in 1963, no generalization can be drawn.

Explanation for Increase in Recorded Depreciation

Since 1948 there has been a tremendous increase in the depreciation and other non-cash charges recorded by corporations. From 1948 to 1962 these charges have increased at the rate of 10.5 percent per annum, which is considerably larger than the 5.7 percent increase in corporate gross product for the same period.[16] The large increase in recorded depreciation and other non-cash charges has added to the controversy over whether these charges are excessive. As pointed out by Brown in the Survey of Current Business,

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[16]Murray Brown, "Depreciation and Corporate Profits," Survey of Current Business, XLIII, (Washington, D. C.: U. S. Department of Commerce, (October, 1963), 7.

there are several reasons why depreciation charges have increased:

> (1)...Capital stocks grew more rapidly than output during the postwar period, and comparatively shortlived equipment, which carries a high annual depreciation quota, increased relative to structures, which have longer service lives and consequently lower annual depreciation.
>
> (2)...the large postwar additions to the capital stock were at prices considerably higher than those embodied in the stock that was subject to depreciation at the beginning of the period. As the older stock was replaced by the new items, depreciation charges rose, reflecting the higher postwar price levels.
>
> (3)...changes in the tax laws and regulations further contributed to the rapid growth in depreciation allowances in the postwar period.[17]

There is no way to segregate the impact of any of these forces without a thorough study of individual businesses, but changes in the tax law and regulations should not have any effect on the accountant's attempt to measure periodic income. The first two forces bringing about an increase in depreciation charges are valid, and the income statement should properly measure any increases brought about by these two factors. But even if depreciation on an income statement does reflect tax practices, there is no justification for

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[17] Ibid., pp. 7-8.

eliminating the depreciation charge in its entirety. Some amount of depreciation must be recorded if income is to be measured properly.

Accelerated Depreciation and the "Profit Squeeze"

Graham and Bauman, employees of the U. S. Department of Commerce, estimated the effects of changes in depreciation methods on profit margins. The amount of depreciation that was due to faster writeoffs alone was isolated and added to total annual reported profits of corporations. This technique revealed that declining profit margins were not solely due to accelerated writeoffs.[18] In contrast to the claims that the "profit squeeze" of the postwar period is due to accelerated depreciation methods and shortened asset lives permitted by changes in the tax law,[19] the study by Graham and Bauman reveals that there would have been a decline in profits

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[18] Robert E. Graham, Jr. and Jacquelin Bauman, "Corporate Profits and National Output," Survey of Current Business XLII, (Washington, D. C.: U. S. Department of Commerce, November, 1962), 19-28.

[19] George Shea, "The Outlook: Appraisal of Current Trends in Business and Finance," The Wall Street Journal, (February 24, 1964), p. 1.

without the added depreciation allowed by tax law changes.[20]

Again, in order to arrive at any meaningful conclusions with respect to whether non-cash charges have been overstated or understated each individual company must be analyzed. Generalizations on the adequacy of non-cash charges are not possible. Depreciation, depletion and amortization are all proper charges to revenue in the determination of periodic income regardless of the timing of cash expenditures and despite the lack of preciseness in the determination of the amount to be charged each period.

Non-Cash Charges and Funds Provision

Depreciation and other non-cash charges are somewhat different from many other common types of charges to operations in that, for the most part, the amount taken as depreciation in any one period is represented by cash outlays or their equivalent in some prior period. Net income, therefore, does not reveal the amount of funds which were made available during the period due to operations. For many years accountants have prepared a "source and application of funds" statement to explain from what sources funds were derived for use in

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[20]Graham and Bauman, loc. cit.

the business and how these funds were employed. The traditional funds statement usually includes a figure called "funds provided by operations" which is determined by adding to net income the depreciation and other non-fund charges for the period and by deducting any deferred revenues that were recognized as being earned.

The determination of cash flow and "funds provided by operations" are similar except that an adjustment is not often made for deferred revenues recognized as being earned in connection with the calculation of cash flow. The term cash flow and its use as an income determination concept are of relatively recent origin. The addition of non-cash charges to earnings, however, has been a device used in funds measurement for more than a quarter of a century as revealed by Kunze:

> The handling of the depreciation charge is often confusing not only to students but to others as well. It is generally shown as an addition to the profits in the funds provided section.[21]

Does depreciation and other non-cash charges provide funds? The following quotation suggests that the answer

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[21]Harry L. Kunze, "A New Form of Funds Statement," Accounting Review, XV, (June, 1940), 222.

to the question is in the affirmative:

> Thanks To The Magic of depreciation and depletion, U. S. industry today is generating capital at a rate of better than thirty billion dollars a year. Last year, the money produced by industry out of its own operations came to almost seventy-five per cent of its capital requirements.[22]

Just the opposite view is expressed by Paton:

> The second mistaken notion...is that the process of accruing depreciation somehow "provides funds." ...Recognizing depreciation doesn't provide a dime, and the same can be said of all other cost accruals.[23]

Definition of Funds

Before pursuing this argument further it is necessary to develop an understanding of just what is meant by funds. The term funds, as used in funds statements, has no one meaning but has been used to designate a variety of concepts--from cash to total resources. The fact that so many definitions of funds exist probably contributed to some of the misunder-

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[22]"Cash Flow: Industry's Thirty-Billion-Dollar Problem," Management Review, L, (September, 1961), 66.

[23]Paton, "The 'Cash Flow' Illusion," p. 245.

standing and disagreement that exists as to non-cash charges and the provision of funds. Some writers do not seem to recognize the distinctions between the various meanings of the term and shift from one concept of funds to the other without making clear the differences that exist between the various concepts of funds being discussed.

One common meaning given to the term funds, as used in the funds statements, is cash.[24] A statement prepared under this concept, usually called a "cash flow statement," recognizes any transaction that involves cash as a funds transaction and, of course, any transaction not involving a cash receipt or expenditure as a non-fund transaction.

Another popular, in fact the most common,[25] use of the term funds is working capital. Working capital is defined as "the excess of current assets over current liabilities; net current assets."[26] The basic purpose of

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[24]Hector R. Anton, Accounting For the Flow of Funds, (Boston: Houghton Mifflin Company, 1962), pp. 31-33.

[25]Mason, op. cit., p. 53.

[26]E. L. Kohler, A Dictionary for Accountants, 2nd ed., (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1957), p. 513.

the funds statement under this concept is to account for the changes in working capital in terms of non-fund transactions.

The most recent meaning given to the term funds is that of all financial resources (purchasing power). In supporting the preparation of funds statements under this definition of funds Perry Mason states:

> This conception of what is meant by "funds" seems to us to be the most useful meaning of the term. The narrower definitions, such as cash or working capital, have often led to the omission from the statement of the effect of transactions which do not directly effect cash or working capital, but which nevertheless are important items in the financial administration of the business.[27]

Other meanings given to funds include: (1) current assets; (2) money assets, current assets minus inventories; and (3) net money assets, money assets minus current liabilities.[28] As is evident, these three variations in the definition of funds lie somewhere between the cash concept of funds and that of working capital.

With so many definitions of funds in use it is understandable why care must be exercised to qualify statements pertaining to funds by indicating what type of funds is

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[27]Mason, op. cit., p. 54.

[28]Anton, op. cit., pp. 35-36.

being discussed.

Relationship Between Non-Cash Charges and Funds

As already indicated, the most widely used concept of funds, where funds is defined as working capital, generally includes among the sources of funds a figure which is labeled "funds provided by operations." The "funds provided by operations" figure is derived by adding to net income items which were shown in the income statement as deductions from revenues that did not require an inflow or outflow of funds (non-fund charges) and deducting revenues which were recognized as being earned in the current period which were not received in cash or billed during the period (non-fund credits).

It should be evident that, in general, the mere action of recording depreciation or recording any other expiration of cost for that matter, could not provide funds. Funds cannot be brought into a business enterprise merely by recording entries on the books.

Funds Statement Presentation Methods

Probably contributing to the mistaken notion that such charges provide funds is the manner in which accountants

have presented the "funds provided by operations" figure in the "statement of source and application of funds." All funds that come into the business as a result of operations are in the form of revenues, and no funds can be produced by mere bookkeeping entries. Rather than beginning with the total revenue figure and subtracting the operating items which required an outflow of funds to determine "funds provided by operations," the funds statement usually[29] starts with the net income figure and adjusts it for any non-fund transactions. Both methods of presenting "funds provided by operations" have been used in annual corporate reports, but the adjustment of net income approach is most widely used because of its convenience.[30]

A good example of the total revenue approach is found in Gulf Oil Corporation's 1963 annual report (Table III).

The non-fund adjustments approach is found in Aluminum Company of America's 1963 annual report (Table IV).

The latter approach to the determination of "funds provided by operations" implies that the recording of

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[29]Mason, op. cit., p. 58.

[30]Ibid.

TABLE III
Gulf Oil Corporation Employment of Funds for
Year Ended December 31, 1963

Funds Were Received From:	
Sales and other revenues	$3,612,234,000
Funds Were Paid For:	
Purchased crude oil, products and other merchandise	1,029,148,000
Taxes on income and general taxes	848,172,000
Wages, salaries and employee benefits	325,405,000
Other expenses	763,708,000
	2,966,435,000
Funds Left from Operations	$ 645,799,000

Source: Gulf Oil Corporation's 1963 annual report, p. 22.

Table IV
Aluminum Company of America Source of Funds
For Year Ended December 31, 1963

Source of Funds:	
Net income	$ 51,078,416
Add; charges against income which did not require current disbursement of funds:	
Depreciation & Depletion	80,408,405
Book value of properties, plants and equipment retired or sold	14,512,881
Increase in deferred credits, reserves and noncurrent liabilities	3,304,988
Increase in reserve for future taxes on income	5,370,846
Other	8,815,463
Total funds from operations	$163,490,999

Source: Aluminum Company of America's 1963 annual report, p. 25.

non-cash charges creates funds. Of course, this is only a convenient approach to funds measurement. The operating funds provision must be the same for a particular entity in the same period regardless of the approach used. The detriment of the latter approach lies in the possibility of misinterpretation--that is, actually taking what the "source and application of funds statement" relates literally, that funds were provided by book entries for non-fund transactions.

A Special Case of Funds Provision

There is one instance in which depreciation accounting might be considered to create funds. In a manufacturing concern depreciation of manufacturing facilities becomes embodied, along with other production costs, in the cost of goods being processed and, hence, becomes a part of the finished goods inventory. If either the working capital or current assets concept of funds is being employed, it would be true that funds were "created" by a mere bookkeeping entry since a part of the cost of plant facilities is transferred to a current asset account. The amount of funds generated is not that amount of depreciation incorporated in the cost of the product sold nor the total depreciation charge for the period but the amount of depreciation that

was transferred to the inventory accounts during the period. On the other hand, if the definition of funds is either cash, money assets, net money assets or all financial resources, the entry transferring some part of the non-cash costs to inventory would not, by definition, provide any funds.[31]

There is also the question of whether the impact of depreciation on taxes and dividends is one of funds provision. The relationship of depreciation to dividends and taxes is not one of funds provision but one of preservation. By reducing the amount of reported net income and income subject to tax, assuming profitable operations, depreciation lowers the amount that would otherwise be available for distribution as dividends and the amount of income subject to tax. The idea that depreciation represents a saving rather than a provision of funds has been expressed in these terms:

> While it is true that in the case of profitable firms an amount equivalent to prepaid cost allocations is neither taxable nor distributable as dividends, this is far from asserting that depreciation creates funds. ...depreciation affects only the distribution of funds by affecting the taxable income and the amounts transferred to Retained Earnings, which in turn set a legal ceiling on the distribution of dividends.[32]

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[31]Zenon S. Zannetos, "Depreciation and Funds Statements," Accounting Review, XXXVII, (April, 1962), 300.

[32]Ibid., p. 302.

Possibility of a Negative Cash Flow

It has been pointed out by Perry Mason that cash flow may be a negative figure, although most references to cash flow seem to indicate that the figure is always positive. Cash flow will be negative if expenses exceed revenues in any period by more than the non-cash charges.[33] When the cash flow figure is negative instead of operations providing funds, operations brought about a decrease in funds which would have otherwise been available.

Adjustments To Depreciation By Security Analysts

For some time security analysts have made adjustments to depreciation in order to arrive at a corrected earnings figure. In the past twenty years there have been two opposing views held by security analysts with respect to what type of adjustment to reported depreciation was necessary in addition to the cash flow concept which would eliminate depreciation entirely. One school of thought holds that depreciation charges are being grossly understated due to certain inherent limitations of conventional accounting

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[33]Perry Mason, op. cit., p. 32.

practices, in particular, the use of historical cost as the depreciation base. The other school of thought, which gained popularity more recently, contends that depreciation charges are in many cases substantially overstated due to certain policy decisions on the part of management and the increased use of accelerated depreciation after such methods were permitted for income-tax purposes.[34]

Referring to the lack of agreement existing between security analysts as to whether depreciation was being overstated or understated, Douglas A. Hayes states:

> About the only point on which the "experts" seem to agree is that depreciation expense is wrong, and some judicious tinkering with the earnings figure is thereby required.[35]

Graham and Dodd, widely recognized authors in the area of security analysis, do not agree with either of the two previously mentioned schools of thought and object to the use of cash flow as an earnings concept. With respect to the complete elimination of the depreciation charge, Graham and Dodd suggest that more rather than less conservatism is needed in the interpretation of an entity's operating

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[34]Douglas A. Hayes, "Depreciation Policies and Earning Power," Financial Analysts Journal, XI (May, 1955), 79.

[35]Ibid.

results; and, the writers offer their concept of expended depreciation as a guide to the proper adjustment for reported depreciation from the investor's point of view. In applying the expended depreciation concept to individual cases the analyst must consider the price paid for the shares, plant replacements and additions and the amount of recorded depreciation.[36]

To explain the operation of the expended depreciation concept Graham and Dodd state:

> ...the plausible answer...will depend upon... what has been happening to the sums charged by the company for depreciation. If the money has gone into plant replacements and additions, it cannot be conceived as accruing to the stockholder as earnings just because he has paid little or nothing for his share of the plant. The money may be considered rather as the equivalent of out-of-pocket operating expenses...
>
> But where a good part of the depreciation money has not been expended on new fixed assets over the years but has been added to working capital or used to retire debt, it would seem proper for the buyer of the stock on a "bargain basis" to consider that these sums contribute to the true return on his cost.[37]

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[36]Benjamin Graham, David L. Dodd and Sidney Cottle, Security Analysis--Principles and Technique, 4th ed., (New York: McGraw-Hill Book Company, 1962), pp. 178-183.

[37]Ibid., p. 183.

Summary

The cash flow concept, both as a term and as an income measuring device, are of relatively recent origin; but, the use of the concept as a convenient method of calculating "funds provided by operations" has been employed for a number of years.

Cash flow has little validity as a substitute for traditionally determined net income. Depreciation and other non-cash costs are as much a cost of operations as expenses which are paid for more or less regularly throughout business operations, and any attempt to exclude depreciation, depletion and amortization from the determination of income cannot produce meaningful results. Even if the amount of non-cash charges is somewhat subjective and may result in lack of comparability of financial statements, there is no justification for entirely eliminating such charges against revenue in arriving at an entity's operating results and financial position changes.

Any significant answer as to the correctness of non-cash charges would have to result from an investigation of individual entities. Blanket statements without such an investigation are invalid. It is possible that some business

units are overstating non-cash items,but because one entity is recording much higher charges than the other is no justification for automatically assuming that such charges are excessive.

The recording of depreciation and other non-cash charges does not create any funds, with the exception of such charges becoming a part of inventory when the concept of funds being employed (other than total resources) is defined to include inventory. Adding back depreciation and other non-cash items is just a simple, short-cut device for arriving at "funds provided by operations." The short-cut of adding depreciation and other non-fund items to net income is not objectionable so long as it is remembered that revenues are the only true source from which operating funds arise.

The real significance of cash flow is in the area of funds. Net income does not reveal the amount of funds which were retained in the business over the past period for which the net income was computed. By adding depreciation and similar items to earnings, the funds retained due to operations is disclosed.

CHAPTER IV

USES AND LIMITATIONS OF CASH FLOW IN JUDGING THE DESIRABILITY OF AN INVESTMENT IN COMMON STOCK

The cash flow concept is said to have developed in response to a need for more useful data in judging the desirability of an investment in common stock than is currently presented in the annual financial statements of corporations. Specifically, the deficiency pointed to is the net income figure as traditionally reported.[1]

On the other hand, others state that the cash flow concept was developed for some reason other than a sincere desire for more useful financial data. The following quotation from Business Week expresses such doubt concerning the development of the concept:

> It's possible to trace the surge of interest in cash flow. The demand for growth stocks has declined rapidly as many companies that had been recommended because of their rapid rate of growth in earnings fell far short of projections. This has forced analysts to cast around for new concepts to use in selling stocks and cash flow is providing a convenient and effective device.[2]

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[1]R. W. Bridwell, "Cash Flow or Profits," Barrons, XL (October 3, 1960), 9ff.

[2]"Cash Flow is the New Fad," Business Week, (November 4, 1961), p. 135.

Before proceeding with an analysis of cash flow with respect to its uses and limitations in judging the desirability of an investment in common stock, other factors which are considered important guides to investment will be mentioned.

Relevant Factors to be Considered

The basic problem of security analysts in advising a common stock investor is in deciding whether the stock of a particular company is overpriced or underpriced in relation to the securities of comparable companies.[3] A large amount of information is necessary if an informed opinion is to be reached. Although no general agreement exists with respect to what should be included in a list of relevant factors, the information desired in making decisions regarding an investment has been classified into two broad categories: qualitative and quantitative.[4]

The qualitative factors pertain to general observations on economic prospects for the companies under study. One list of important qualitative factors includes:

(1) the character of the products and the

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[3]Ibid., p. 136.

[4]Benjamin Graham, David L. Dodd and Sidney Cottle, 4th ed., Security Analysis--Principles and Technique, (New York: McGraw-Hill Book Company, Inc., 1956), p. 86.

> apparent trend and stability of their markets, (2) the degree of diversification of product line and customers, (3) the nature of the cost structure and production problems, (4) the intensity of the competition within the industry, (5) the relative competitive position as evidenced by natural advantages or managerial capacities, and (6) the prospects of competition from other industries.[5]

The quantitative factors include all useful data on company operations and financial position. The quantitative factors have been classified as follows: (1) capitalization; (2) earnings and dividends; (3) assets; and (4) operating statistics.[6]

Neither the qualitative nor the quantitative information when considered alone is generally sufficient to reach an informed opinion as to whether the common stock of a particular company is a good investment. Each group of data is modified by the other and must be considered. The quantitative data are the most important as far as placing a value on securities is concerned, but qualitative factors enable the investigator to gain a general view of the risks and opportunities present in the companies being analyzed and also provides a background

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[5]Douglas A. Hayes, Appraisal and Management of Securities, (New York: The MacMillan Company, 1956), p. 87.

[6]Graham, et al., loc. cit.

against which the quantitative data presented in past financial statements may be judged.[7]

The factors most important from the standpoint of this study and on which primary emphasis will be placed are dividends and earnings. Dividends and earnings have been recognized as major determinants of the value of common stocks for some time. In fact, the theoretical definition of the present value of a common stock is "the sum of all its future dividends discounted to the current interest rate;"[8] and, earnings must exist before there can be dividends. The reason for emphasizing earnings and dividends is that cash flow has been touted as both an earnings concept which is more valid as a tool of investment decisions than traditionally determined net income and as a substitute for accounting income.

The following is an example of statements being made in support of the cash flow concept:

> "Cash flow" is a very useful and informative determination when used properly. It is particularly helpful to management in planning and to others in making judgements regarding

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[7]Hayes, op. cit., p. 88.

[8]Arnold Bernhard, The Evaluation of Common Stocks, (New York: Simon and Schuster, 1959), p. 39.

> the probable future ability of a business to: (1) retire debt without refinancing, (2) increase and maintain dividend policy, and (3) expand, modernize, or replace fixed assets...[9]

Does cash flow have more meaning than net income in judging the desirability of an investment in common stock? Can cash flow computations be used in conjunction with net income in investment decisions? These are the questions which the following section of this chapter will attempt to answer.

The Role of Cash Flow

In a recent article of Moody's Stock Survey the differences between the price/earnings ratio and the price/cash flow ratio are pointed out. In terms of the price/cash flow ratio the article states:

> 1. It has lower numerical multiples than the price/earnings ratio.
> 2. It is normally more stable in performance.
> 3. It tends to diverge more in size from industry to industry.
> 4. It is greatly influenced by the rate of corporate modernization and expansion.

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[9]Thomas L. Halton, "The Growing Confusion of Profit Accounting," Financial Analysts Journal, XX, (March, 1964), 55.

5. It is more variable in quality than the price/earnings ratio.[10]

Of course, the price/cash flow ratio must be lower than the price/earnings ratio since cash flow will be larger than earnings if there is some amount of depreciation, depletion or amortization. The relative stability of the price/cash flow ratio results from the fact non-cash charges tend to be less volatile than net income, and the stability of these charges tend to offset fluctuations in earnings. Divergence of the price/cash flow ratio from industry to industry and the influence of corporate modernization and expansion on the ratio is explained in terms of the differences that exist in the amount of investment required by various industries in depreciable property, intangible assets and natural resources.

To explain the fifth characteristic the article in Moody's Stock Survey maintains:

> ...Because of its depreciation (or depletion) component, the price/cash flow ratio is in one sense a less reliable measuring device than the price/earnings ratio. Depreciation, of

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[10]"Price/Earnings vs. Price/Cash Flow--A Different Yardstick for Valuation?" Moody's Stock Survey, (New York: Moody's Investors Service, Inc., February 11, 1963), p. 729.

> course,is a dual element in accounting. It is at one and the same time an expense item and a source of funds. It is, however, money in pocket.[11]

In Chapter III it was pointed out that only in a very limited sense, with particular definitions of funds being employed, could non-cash charges be considered to provide funds; and, under no circumstances can such charges be considered to create cash. It was also revealed that cash flow should not be considered an earnings concept.

Relationship Between Changes in the Cash Balance and Cash Flow

The preceeding quotation from Moody's Stock Survey states that cash is retained in the business due to non-cash charges. Retention of cash due to non-cash charges is possible since, as explained in Chapter III, the period in which such charges appear as a deduction from revenues and the period in which expenditures of cash were made for such charges do not necessarily coincide. However, this is not to say that the cash flow of a business unit for a period is equal to the increase in the cash balance.

There are numerous possibilities as far as the effect

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[11] Ibid.

that operations can have on asset and liability balances. If the cash flow figure exceeds the non-cash charges for the period there was an increase in the net assets of the entity. But the increase in net assets is not necessarily reflected by an increase in cash equal to the amount of recorded depreciation, depletion and amortization as indicated by the preceeding statement from Moody's Stock Survey.[12]

Assuming an increase in net assets due to operations during the period, the following changes in asset and liability balances are possible: (1) Total reflected as an increase in one or more asset accounts; (2) total reflected as a decrease in one or more liability accounts; (3) total reflected by decreases in liability accounts and increases in asset accounts; (4) total reflected by increases and decreases in various asset accounts, with increases exceeding decreases by the amount of the net income; (5) total reflected by increases and decreases in various liability accounts, with the decreases exceeding the increases by the amount of the net income; and (6) increases and/or decreases in both asset and liability accounts, with the total asset increases and liability decreases exceeding the total of asset decreases

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[12] Ibid.

and liability increases by the amount of the net income.

As suggested by the first alternative, it is possible that the total increase in net assets for a period may be reflected solely in the cash account. However, an arbitrary assumption that either cash flow or non-cash charges is equal to the change in the cash account before dividend distributions is not appropriate. The increase in the cash account, assuming there is an increase, before considering dividend distributions may be greater or less than the cash flow for the period; and, the same statement is applicable to the relationship between non-cash charges and the increase in the cash balance. A simple illustration will help to demonstrate this point. Assume the following facts relating to the Hypothetical Company and its operations during the year 1963:

> (1) All revenue is derived from the sale of one product--hypo.
>
> (2) Hypo is purchased on account from outside suppliers, and during the year 20 units were acquired at a cost of $10,000 each.
>
> (3) Operations are carried on in a building which cost $100,000 on December 31, 1961. It is estimated that the building will have a useful life of 20 years, and at the end of this period it will have no salvage value. Straight-line is considered to be the most appropriate depreciation method.
>
> (4) Payments on account totaled $160,000 during the year.
>
> (5) Eighteen units of hypo were sold on account for $15,000 each.
>
> (6) Collections on account totaled $225,000.

(7) Cash expenditures were required for all operating expenses, other than depreciation, and totaled $25,000 during the year.

(8) No dividends were paid, and earnings are not subject to income taxes.

(9) Account balances as of January 1, 1963 were: Cash, $20,000; Accounts Receivable, $30,000; Merchandise Inventory, $10,000; Building, $100,000; Accumulated Depreciation--Building, $5,000; Accounts Payable, $10,000; Capital Stock, $140,000; and Retained Earnings, $5,000.

A comparative balance sheet, an income statement and a cash flow statement are presented below to reflect the foregoing data.

TABLE V
Hypothetical Company
Balance Sheet
As of December 31

	1962	1963
Assets:		
Cash	$ 20,000	$ 60,000
Accounts Receivable	30,000	75,000
Inventory	10,000	30,000
Building	100,000	100,000
Less: Accumulated Depreciation	(5,000)	(10,000)
Total Assets	$155,000	$255,000
Liabilities and Capital:		
Accounts Payable	$ 10,000	$ 50,000
Capital Stock	140,000	140,000
Retained Earnings	5,000	65,000
Total Liabilities and Capt.	$155,000	$255,000

TABLE VI
Hypothetical Company
Income Statement
For Year Ended December 31, 1963

Sales		$270,000
Less: Cost of Sales		180,000
Gross Profit on Sales		$ 90,000
Less: Operating Expenses		
Cash Expenditures	$25,000	
Depreciation	5,000	30,000
Net Income		$ 60,000

TABLE VII
Hypothetical Company
Statement of Cash Flow
For Year Ended December 31, 1963

Net Income	$60,000
Depreciation	5,000
Cash Flow	$65,000

The comparative balance sheet, Table III, reveals an increase in cash of $40,000 for the period; but, cash flow, presented in Table V, was $65,000. Therefore, under the assumed conditions, the increase in the cash balance was less than the cash flow for the period.

The assumptions could be changed so that cash flow would equal the increase in the cash balance. By assuming that payments on account totaled $10,000 less and collections on account totaled $15,000 more than originally assumed, the increase in cash would be equal to cash flow for the

period. With these changes the December 31, 1963 balance sheet would show a Cash balance of $85,000; an Accounts Payable balance of $60,000; and an Accounts Receivable balance of $60,000.

It is also possible to rearrange the assumed conditions and produce an increase in cash greater than the cash flow for the period. If all facts were the same as originally assumed except that collections on account totaled $300,000, the increase in the cash account over the period would be $115,000 which is $50,000 greater than cash flow.

Thus, the preceeding analysis illustrates that there is not necessarily any correspondence between cash flow and the change in the cash balance. Neither cash position changes nor the availability of cash for any particular purpose is determined by cash flow. The cash position and availability of cash is primarily determined by factors which are not related to cash flow, with one such factor being managerial decisions. In the process of cash budgeting an estimate is made of the expected receipts and disbursements, and no consideration is given to the non-cash charges.[13]

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[13]Herman C. Heiser, Budgeting Principles and Practice, (New York: The Ronald Press Company, 1959), pp. 326-327.

It is true that the conditions assumed for the Hypothetical Company do not accurately portray the operations of most companies whose stock is widely held. However, if the facts are altered to fit actual situations--by changing the type of firm from merchandising to manufacturing and by making the earnings subject to income taxes, for example--it would not materially affect the conclusions reached. Such changes would only serve to complicate the analysis.

Estimating Dividend Potential

One area in which cash flow can aid in judging the desirability of an investment is by serving as a guide in estimating dividend potential. The percentage of dividends to cash flow has shown less variation over a ten year period from 1953 to 1962 than the percentage of dividends to net income. This is illustrated by Figure I.[14] Therefore, a dividend estimate based on cash flow for a number of years may be preferable to an estimate of dividend potential based on a projection of net income.

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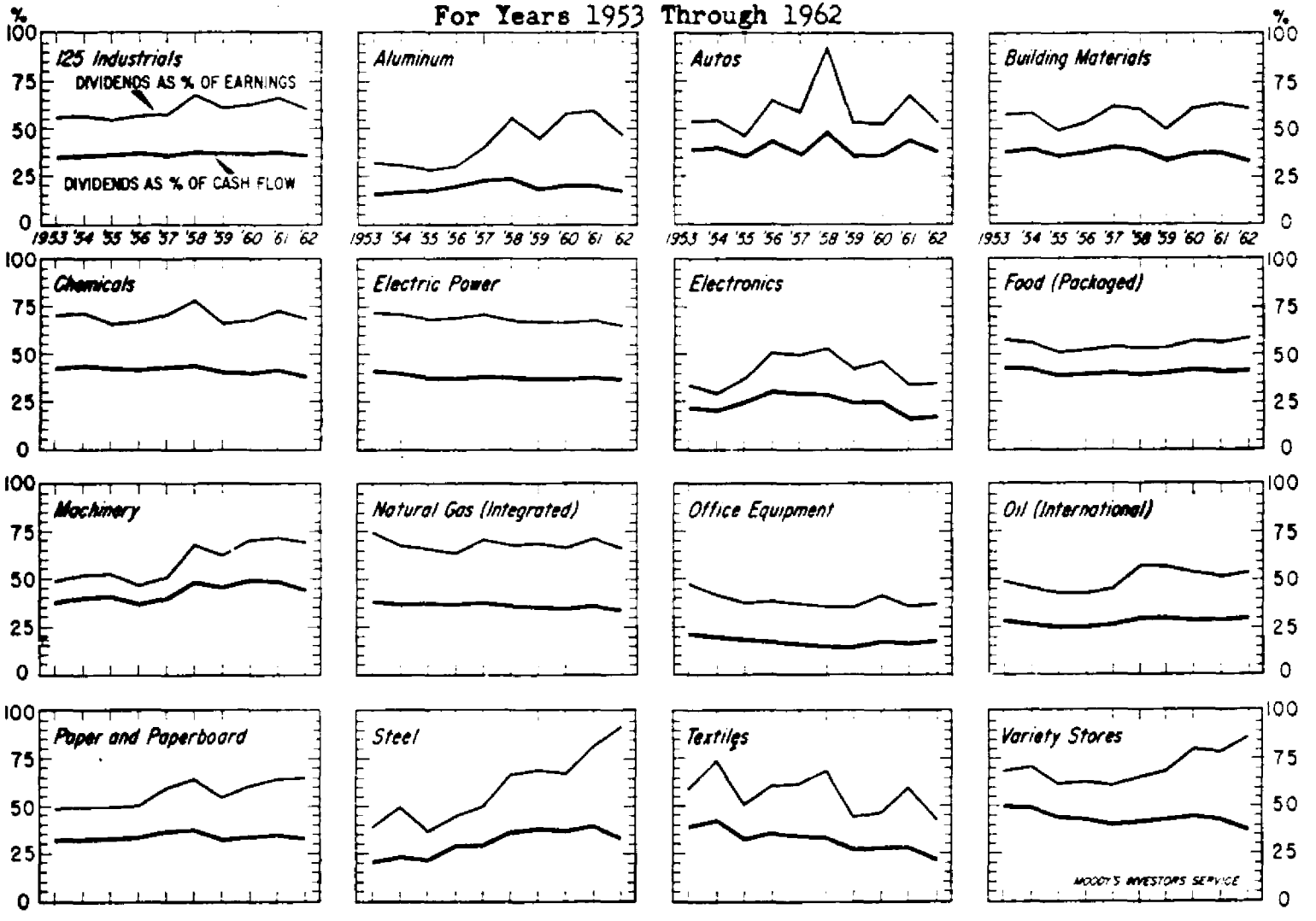
[14] "Cash Flow and the Dividend Trend," Moody's Stock Survey, (New York: Moody's Investors Service, Inc., June 10, 1963), p. 557.

Figure I

Dividends as a Percent of Earnings and Cash Flow

For Years 1953 Through 1962



Source: "Cash Flow and the Dividend Trend," Moody's Stock Survey, (New York: Moody's Investors Service, Inc., June 10, 1963), p. 557.

In commenting on the relationship of cash flow to the dividend trend an article in Moody's Stock Survey reveals:

> Dividends actually do bear a more constant relationship to cash flow than to earnings... Especially striking is the stable payout of cash flow in individual industries over the years.[15]

Growth Measurement and Projection of Probable Future Stock Prices

The Value Line Investment Survey, a weekly investor service, provides a review of 1,100 leading stocks by answering five questions. The five questions, which the service maintains should be asked by each intelligent investor to himself, are as follows:

> (1) How sound a stock is it?
> (2) How well can it be expected to perform in the market during the next 12 months as compared to other stocks?
> (3) How attractive is it over a 3- to 5-year pull relative to other stocks?
> (4) How much will this stock yield--that is to say, how much income will I get from it in the next 12 months?
> (5) How suitable is this stock for me now, in the light of my personal needs?[16]

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[15] Ibid.

[16] The Value Line Investment Survey, "The Weekly Summary of Advices and Index," (New York: Arnold Bernhard and Co., Inc., July 10, 1964), p. 2.

In answering the first question relating to the soundness of a particular stock, the 1,100 stocks are classified according to "quality." "Quality," in turn, is mainly determined by the stability of a stock's price over the past ten years and by the growth in the company's cash earnings. Although the term cash earnings is not defined by the service, the cash earnings per share figures correspond rather closely to the cash flow per share figures presented in Moody's Handbook of Widely Held Common Stocks.[17] "Quality" is explained as follows:

> ...Quality refers to the enduring character of the stock and the company. It has nothing to do with whether or how much the stock will rise or fall in price in a delimited time period.[18]

Growth is calculated by the service in terms of cash flow per share rather than earnings per share or percentage return on equity capital. Cash flow is treated as the most important variable in determining growth, which is considered along with the price stability of a stock in determining "quality."

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[17] Moody's Handbook of Widely Held Common Stocks, Second 1964 Edition, (New York: Moody's Investors Service, Inc., 1964), 624 pp.

[18] The Value Line Investment Survey, loc. cit.

The second and third questions are answered by projections of data from one to five years into the future along with the consideration of a risk factor. Cash flow per share figures are most often used in making the projections, but other data such as book value, asset value and reported earnings are also employed. For example, of the eighty-eight projections in the April 3, 1964, edition of The Value Line Investment Survey, eighty-six were based on cash flow per share exclusively, one had no revealed basis for projection and two projections were made for one stock with one being based on cash flow and the other on book value. Further, ninety of the ninety-three future stock values forecast in the February 28, 1964, edition were based on cash flow per share while the remaining three projections used three different bases--asset value, net working capital and reported earnings.

Some multiple of the five year moving average of cash flow per share, when this figure is the basis of projections, is plotted against the stock prices through some current price and extended to colums on the graph represented by future periods. In this manner, the stock's performance in terms of forecasted price movement can be extracted from the graph.

The answer to question four is given by the survey and is an "estimate of the dividends that will be paid in the next twelve months related to the current price."[19] If there is a relationship between cash flow and the answer to this question, it is not mentioned.

No answer is given for the fifth question, but the service provides a device whereby the investor can arrive at the answer by assigning weights to the solutions to the other four questions. Although not directly related to cash flow, the answer to question five depends upon cash flow since the answers to the first three questions are used in arriving at the solution to this question.[20]

From the preceeding description it is apparent that The Value Line Investment Survey places a great deal of emphasis on cash flow. Cash flow is utilized in arriving at the answer to four of the five questions considered important, with primary emphasis being placed on cash flow as a determinant of growth and as a tool for forecasting probable future stock prices.

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[19] Ibid., p. 11.

[20] Ibid., p. 12.

The validity of cash flow as a growth measurement depends upon the factors causing total cash flow to increase. Since cash flow is net income plus non-cash charges, an increasing cash flow must result from an increase in earnings and/or non-cash charges. If increased cash flow is the result of a larger amount of investment in assets subject to depreciation, depletion and amortization, there is no question of growth in terms of assets. However, the increase in assets may be due to changes in the price level and the acquisition of more costly properties rather than the expansion of productive facilities. If the larger amount of investment in assets does not produce correspondingly larger earnings, the growth in the entity's assets alone is not desirable. Advantageous growth would be represented by an expansion in net income or by comparable increases in both factors comprising cash flow, but the consideration of the total of earnings and non-cash charges gives no indication of the changes in the magnitude of the two items individually. Consequently, the use of cash flow in measuring the growth of an enterprise is of doubtful usefulness and cannot be used as a meaningful substitute for properly determined net income.

Even though cash flow is not an effective tool in

measuring the growth of an enterprise, the concept should not be discounted entirely as a tool to be used in investment decisions. If two companies have the same earnings and are otherwise comparable except that one has a much higher cash flow, the one with the higher cash flow could be the more logical choice. Assuming no overstatement or understatement of non-cash charges, the company with the higher cash flow has demonstrated that it can operate profitably with more costly assets, the cost of which may more nearly represent current costs. The company with the smaller amount of cash flow may not be able to operate as efficiently if assets currently in use have to be replaced at higher current prices.

No judgment can be rendered at this time on how effective the use of cash flow is as a tool for forecasting the prices of stocks since its use as a forecasting tool is of relatively recent origin. After lapse of sufficient time to determine the effectiveness of cash flow as a predictor of market values, research in this area would be desirable.

Summary

In summary, cash flow as a tool in determining the desirability of an investment in common stock is of limited usefulness. The usefulness of net income and earnings

computations in investment decisions have not been superseded by cash flow and cash flow computations. The areas in which cash flow and cash flow computations can be of value in deciding among the various common stock investment possibilities is in the estimation of dividend potential and in revealing those companies with demonstrated ability to operate under more current cost conditions. The cash flow figure does not reveal the amount of cash available for any particular purpose nor does it measure the increase in cash for the period and the use of cash flow as a tool to measure growth is of questionable value.

CHAPTER V

THE CASH FLOW CONCEPT IN CORPORATE ANNUAL REPORTS

The preceeding chapters have presented a background against which the cash flow concept could be analyzed, given an analysis of the concept and discussed the uses and limitations of cash flow in judging the desirability of an investment in common stock. A review of how cash flow data have been presented in corporate annual reports and the desirability of including such data in annual reports will be the topics covered in this chapter.

A Review of How Cash Flow Data Have Been Presented

The American Institute of Certified Public Accountants publishes each year a study of significant accounting trends and techniques. A total of 600 annual reports of corporations are included in the survey; and, the list of companies reviewed remains fairly constant, with changes being made only "as a result of corporate liquidations, mergers, etc., and the addition of new companies as substitutes."[1] In the 1963

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[1]American Institute of Certified Public Accountants, Accounting Trends and Techniques, Seventeenth edition, (New York, 1963), iii.

edition of Accounting Trends and Techniques the following tabulations (Tables VIII and IX) are presented with respect to cash flow data in annual reports.

TABLE VIII
Cash Flow Data In Annual Reports
For Years 1960 Through 1962

	1962	1961	1960
Number of Companies:			
Referring to "cash flow"	101	80	61
Not referring to "cash flow"	499	520	539
Total	600	600	600

Source: Accounting Trends and Techniques, Seventeenth edition, American Institute of Certified Public Accountants, (New York, 1963), p. 204.

TABLE IX
Method of Presentation or Location of
Cash Flow Data In Annual Reports
For Years 1960 Through 1962

	1962	1961	1960
Referred to in:			
President's letter or financial review	45	42	38
Operating summaries or statistics	29	16	4
Highlights	12	9	8
Separate statements	13	8	8
Chart form	9	6	12
Total	108	81	70

Source: Accounting Trends and Techniques, Seventeenth edition, American Institute of Certified Public Accountants, (New York, 1963), p. 204.

Cash flow data have increasingly become a part of corporate annual reports. As indicated by Table VIII, of the 600 corporate reports included in the survey in 1962, 101 mentioned cash flow. This represents an increase of 6 2/3 per cent over the 61 reports containing cash flow data in 1960. The increasing tendency to include information pertaining to cash flow in various sections of annual reports, as indicated by Table IX, is also noteworthy. The totals of the number of companies referring to cash flow in annual reports (Table VIII) do not agree with the totals of the method of presentation and location of such data (Table IX) because cash flow information is presented in more than one section and in different manners in some reports.

To avoid duplicating the efforts of the American Institute of Certified Public Accountants, the purpose of the review of annual reports in this study was not to determine how prevalent cash flow data is in annual reports but to reveal the different ways in which information pertaining to cash flow is presented and to determine the desirability of such presentations. In conducting this study the annual reports of 75 corporations for the years 1961, 1962 and

1963 were reviewed.[2] The following examples represent a cross section of the ways in which cash flow data were presented in the reports reviewed.

Brief Comments Only

References to cash flow in the president's letter section of the reports reviewed were primarily in the form of brief comments, and a few such comments were also found in the financial review sections. The quotations which follow are examples from annual reports in which references to cash flow were limited to brief comments.

The 1963 annual report of American Machinery and Foundry Company included the following comments in the president's letter section:

> The results of 1963 operations were:
> .net income of $19,010,000 or $1.09 a share on the common stock after preferred dividends...
> .cash earnings from operations of $48,467,000 or $2.81 a share...[3]

No explanation was given as to what was meant by

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[2]For an alphabetical list of corporations included in the review, see the bibliography.

[3]American Machine and Foundry Company, 1963 Annual Report, p. 4.

"cash earnings" anywhere in American Machine and Foundry's 1963 report. However, an investigation of income statement items reveals that "cash earnings" represents the sum of net income, depreciation and amortization, provision for potential loss on receivables and 1963 deferred income taxes.

The financial review section of Commercial Solvents Corporation's 1963 annual report contained the following comment:

> CASH FLOW continued to be adequate to meet the Company's demands for expansion, dividend requirements and debt retirement.[4]

The financial review section of Ex-Cell-O Corporation's 1963 report contained the following comments:

> Cash flow is the amount of cash developed through operations. It is made up of cash generated from net income, depreciation, amortization of intangible assets and deferred credits. Our cash flow in 1963 was $27,088,112, an increase of $400,114 when compared with 1962 cash flow. Cash flow amounted to $7.48 per share of common stock in 1963.
>
> Although our cash flow has been substantial during the past few years, it has not been adequate to finance our capital expenditures.... Accordingly, we have had to supplement this cash flow through additional borrowings.... It is anticipated that the present rate of cash flow should continue through 1964 and should be adequate for normal operating requirements.

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[4]Commercial Solvents Corporation, 1963 Annual Report, p. 4.

> This should make possible further reduction in our loans in 1964.[5]

Information pertaining to cash flow in the president's letter to stockholders of the 1963 annual report of General Cable Corporation was as follows:

> General Cable Corporation's net earnings as well as its earnings per share of Common Stock in 1963 were well above the corresponding earnings in the previous year and on a cash flow basis established a new high level...
>
> The cash flow on each share of Common Stock in 1963 was $6.18 while in 1962 it was $5.28.[6]

The succeeding comments were a part of the president's letter in the 1963 report of Johns-Manville Corporation:

> Earnings were the second highest in the Company's history, 15.7 percent ahead of 1962 and cash flow, the sum of net earnings and provision for depreciation and depletion was second only to 1959.[7]

The 1962 letter to stockholders of Koppers Company, Incorporated, included the following comments:

> Cash flow from operations in 1962--consisting

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[5]Ex-Cell-O Corporation, 1963 Annual Report, pp. 16 and 18.

[6]General Cable Corporation, 1963 Annual Report, pp. 4-5.

[7]Johns-Manville Corporation, 1963 Annual Report, p. 1.

> of net income, depreciation and depletion, and deferred Federal income taxes--totaled $22.3 million or $9.64 per share of common stock, up from $8.13 per share in 1961.[8]

In the 1962 annual report of Molybdenum Corporation of America the president's letter discloses the following under the heading "financial position:"

> During 1962, $582,417 was required for exploration work at Questa, and capital expenditures at other plants and mines totaled $797,196. These large capital requirements in excess of cash provided by earnings and depreciation precluded the payment of a cash dividend...[9]

Data pertaining to cash flow were presented in the 1963 report of Monsanto Chemical Company as follows:

> Cash flow--i.e., earnings before depreciation, obsolescence, depletion, etc.--amounted to $6.59 a share in 1963, compared to $5.95 a share in 1962, after adjustment for the 1963 stock dividend.[10]

Included under the heading "sales and earnings" in the letter to share owners section of the 1962 report of J. P. Stevens and Company, Incorporated, were the following statements on cash flow:

> The Company's cash flow was the largest in its

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[8]Koppers Company, Inc., 1962 Annual Report, p. 4.

[9]Molybdenum Corporation of America, 1962 Annual Report, p. 2.

[10]Monsanto Chemical Company, 1963 Annual Report, pp. 2-3.

> history. Adding depreciation charges of $17,861,000 to net earnings of $16,019,000, the cash flow was approximately $34,000,000, compared with $26,000,000 in 1961 and $28,000,000 in 1960. Depreciation charges during the year exceeded 1961 by about $2,500,000, 1960 by about $5,200,000, and have nearly doubled in the last five years.[11]

The financial review section of The Youngstown Sheet and Tube Company's 1962 annual report includes information pertaining to cash flow under the heading "net profit:"

> Our cash flow from net income plus depreciation provisions was $67,209,284, or $19.23 per share in 1962, compared with $53,715,921, or $15.39 per share in 1961.[12]

Tabular Presentations and Related Comments

Cash flow data in the form of operating statistics is a popular method of presentation as indicated by Table IX, and this mode was most often used to give information relating to cash flow in the financial review and highlights section of the reports examined in this study. The following examples indicate the manner in which such information was displayed.

---

[11]J. P. Stevens and Company, Inc., 1962 Annual Report, p. 30.

[12]The Youngstown Sheet and Tube Company, 1962 Annual Report, p. 5.

The 1963 report of Acme Steel Company reveals total and per share cash flow after preferred dividends in both the highlights and financial review sections. The data, as presented in the financial review section, follows:

> Funds available to the company in 1963 amounted to $12,074,000, or $4.27 per Common share. In 1962, available funds were $9,981,000, or $3.53 per Common share. The source of funds for the two years follows:[13]

TABLE X
Acme Steel Company
Source of Funds
For Years Ended December 31

	1963	1962
	(thousands of dollars)	
Net earnings	$ 5,355	$ 3,386
Depreciation and amortization	6,807	6,496
Deferred income taxes	943	1,164
	$13,105	$11,046
Less--Preferred dividend payments	1,031	1,065
Cash flow	$12,074	$ 9,981
Cash flow per share	$4.27	$3.53

Source: Acme Steel Company, 1963 Annual Report, p. 9.

> Total fund requirements for 1963 were $16,262,000. Of this, three fourths was provided by the cash flow detailed above, and the balance, $4,188,000, was from a reduction of working capital...[14]

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[13] Acme Steel Company, 1963 Annual Report, p. 9.

[14] Ibid.

Total cash flow is referred to in three different sections of Ashland Oil and Refining Company's 1963 annual report. References to cash flow in the letter to stockholders and financial review sections are in the form of brief comments. The highlights section of the report is presented in Table XI.

In the letter to stockholders section of Ashland Oil and Refining Company's 1963 report the president writes:

> ...The combination of the two oil and gas production organizations into a single department, supported by a larger cash flow and much additional undeveloped acreage, enabled us to expand our exploratory efforts...[15]

The financial review section of Ashland Oil and Refining Company's 1963 report contains the following comments pertaining to cash flow:

> Capital expenditures during 1963, exclusive of the United Carbon acquisition, were $22,809,796. Capital expenditures during 1964 should be at approximately the same level. Expenditures will be influenced by the amount of cash generated by our operations. In 1963 cash flow generated by net income, depreciation, depletion, amortization, and retirements totaled $39,560,135, and exceeded dividend requirements by $30,056,274.[16]

The annual report of Coastal States Gas Producing

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[15]Ashland Oil and Refining Company, 1963 Annual Report, p. 2.

[16]Ibid., p. 6.

TABLE XI
Ashland Oil and Refining Company
Three Years In Brief
For Fiscal Years Ended September 30

	1963	1962	1961
Net Sales	$366,107,810	$318,139,197	$312,875,460
Net Income	$ 18,109,420	$ 15,324,447	$ 15,251,456
Income per common share	$2.35	$2.06	$2.12
Cash dividends paid per common share	$1.20	$1.20	$1.10
Cash dividends paid on common stock	$ 9,060,827	$ 8,530,138	$ 7,358,022
Cash dividends paid on preferred stock	$ 443,034	$ 691,273	$ 1,158,048
Working capital	$ 76,534,360	$ 54,769,741	$ 48,613,012
Long term debt	$102,368,714	$ 40,370,000	$ 37,454,000
Depreciation, depletion, amortization & retirements	$ 21,450,715	$ 17,802,787	$ 17,678,451
Expenditures for capital additions	$ 22,809,796	$ 16,280,390	$ 29,467,268
Depreciated book value of properties	$151,301,886	$107,890,805	$109,413,202
Cash flow--net income plus depreciation, etc.	$ 39,560,135	$ 33,127,234	$ 32,929,907
Net worth at end of year	$155,059,551	$141,855,613	$138,310,008
Refined products sold (barrels per day)	169,795	163,888	158,567
Number of stock-holders	39,983	38,906	40,344
Number of employees	6,200	4,700	4,700

Source: Ashland Oil and Refining Company, 1963 Annual Report, p. 1.

Company for 1963 contains numerous references to "cash earnings," which is defined as "income before depletion and depreciation and provision for federal income taxes."[17] Methods used to show "cash earnings" vary from statistical presentations in the highlights and statistical summary sections to comments in the president's letter and discussions and charts in the financial review section. The first half of the highlights section of the report follows:

TABLE XII
Coastal States Gas Producing Company
Highlights
For Fiscal Years Ended June 30

	1963	1962	% Change
Gathering sales	$34,269,924	$26,533,997	+ 29%
Gas and crude oil production	$ 5,787,058	$ 4,775,217	+ 21%
Total revenues	$43,230,372	$32,838,494	+ 32%
Cash earnings	$14,014,791	$ 9,471,548	+ 48%
Per share cash earnings	$2.21	$1.54	+ 44%
Net income	$ 8,952,999	$ 5,888,384	+ 52%
Per share net income	$1.41	$0.96	+ 47%
Common shares outstanding	6,352,046	6,165,352	+ 3%

Source: Coastal States Gas Producing Company, 1963 Annual Report, Inside Front Cover.

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[17]Coastal States Gas Producing Company, 1963 Annual Report, p. 2.

Two paragraphs in the financial review section of Coastal States Gas Producing Company's 1963 report are related to cash flow:

> Cash earnings (income before depletion and depreciation and provision for federal income taxes) were $14,014,791, an all-time high. This was an increase of 48% over the $9,471,548 reported for the 1962 fiscal year. Cash earnings in fiscal 1963 were equal to $2.21 per share on the 6,352,046 shares outstanding on June 30, 1963, or 44% above fiscal 1962 cash earnings of $1.54 per share based on 6,165,352 shares outstanding at year end.
>
> It should be noted that cash earnings are not affected by deductions for depletion and depreciation or by provisions for deferred federal income taxes as these items do not represent current cash outlays.[18]

Cash flow data appears in the highlights, financial review and statistical summary sections of Consolidated Foods Corporation's 1963 report. The terms cash flow and "cash net income" are used interchangeably throughout the report. Neither term is defined anywhere in the report. However, depreciation is said to be "one factor in measuring cash flow."[19] The highlights section of Consolidated Foods Corporation's 1963 report is presented in Table XIII.

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[18] Ibid., pp. 2 and 3.

[19] Consolidated Foods Corporation, 1963 Annual Report, p. 6.

TABLE XIII
Consolidated Foods Corporation
Highlights
For Fiscal Years Ended June 30

	1963	1962
Net sales	$563,115,446	$519,772,712
Net profit before federal taxes on income	$ 21,752,955	$ 17,987,281
Federal taxes on income	$ 11,275,785	$ 8,918,967
Net profit for year:		
From operations	$ 10,320,471	$ 8,593,531
From capital gains	156,699	474,783
Total	$ 10,477,170	$ 9,068,314
Earnings per share on common stock outstanding at close of the year:		
From operations	$2.18	$1.81
From capital gains	.03	.10
Total	$2.21	$1.91
Cash net income per share	$3.56	$3.12
Dividends paid per share	1.175	1.065
Dividends paid to shareholders	$ 5,565,387	$ 5,145,323
Net working capital	66,192,861	54,017,798
Fixed assets--net	56,098,080	47,028,770
Expenditures for fixed assets	16,879,193	10,243,306
Depreciation charged during the year	6,382,600	5,773,806
Net worth	92,868,903	88,614,366
Book value per common share	19.63	18.64
Common shares outstanding	4,731,170	4,752,880
Number of common shareholders	17,800	17,500

Source: Consolidated Foods Corporation, 1963 Annual Report, p. 1.

Cash flow data are presented in the financial highlights, letter to shareholders and statistical summary sections of Crane Company's 1963 annual report. Graphic

analysis is employed to portray cash flow per share for the years 1954 through 1963 in the statistical summary section. The letter to shareholders includes the following comment pertaining to cash flow under the "sales and earnings" heading:

> Cash flow (earnings plus depreciation) for the year just completed totaled $10.68 per common share, compared with $8.73 per share for the previous period.[20]

The financial highlights section of Crane Company's 1963 report follows:

TABLE XIV
Crane Company
Financial Highlights
For Years Ended December 31

	1963(1)	1962(2)
Sales	$337,366,000	$333,767,000
Earnings	5,447,000	3,194,000
Earnings per common share	4.30	2.21
Depreciation per common share	6.38	6.52
Cash flow per common share: (Earnings plus depreciation)	10.68	8.73
Current assets	129,859,000	127,603,000
Current liabilities	38,380,000	39,376,000
Total assets	201,108,000	197,978,000
Shareholders' equity per common share	101.77	96.18
Dividends paid per common share	2.00	2.00

(1) Based on 1,192,420 common shares outstanding December 31, 1963.
(2) Based on 1,285,270 common shares outstanding December 31, 1962.

Source: Crane Company, 1963 Annual Report, p. 2.

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[20]Crane Company, 1963 Annual Report, p. 3.

The statistical summary section of the 1963 report of General American Oil Company of Texas is subdivided into four groups of data. The four subdivisions are labeled "financial position, income statement, common dividends and operating statistics."[21] Discussions pertaining to cash flow as well as graphic presentations are found in other sections of the report. Although the "income statement" section of the statistical summary contains data for the ten year period 1954 through 1963, only the data given for the two latest years will be included in Table XV.

The 1963 annual report of Georgia-Pacific Corporation makes extensive use of cash flow data. In addition to total and per share figures in the highlights, letter to stockholders and statistical summary sections of the report and discussions related to total cash flow in the financial review section, the statistical summary contains ratios labeled "net cash flow generated from operations as a % of sales."[22] The significance of cash flow to the company is explained in the financial review section as follows:

> The financial position of the Corporation at

---

[21]General American Oil Company of Texas, 1963 Annual Report, pp. 22-23.

[22]Georgia-Pacific Corporation, 1963 Annual Report, pp. 28-29.

TABLE XV
General American Oil Company of Texas
Income Statement
For Fiscal Years Ended June 30

	1963	1962
Gross operating income	$32,654,633	$30,860,748
Operating expenses exclusive of those set forth below	7,457,861	7,541,284
Taxes, including those on income	2,548,001	2,523,876
Dry holes, abandonments and lease rentals	1,694,893	1,202,800
Depletion and depreciation	9,338,810	8,669,115
Operating income	11,615,068	10,923,673
Other gains after taxes	735,500	617,347
Interest and miscellaneous income	971,307	955,984
Interest expense	(6,118,602)	(5,971,814)
Net income	7,203,273	6,525,190
Dividends on preferred shares		
Net income available for common shares	$ 7,203,273	$ 6,525,190
Net income per common share	$1.98	$1.88
Cash flow (net income plus depletion, depreciation and exploratory expenses)	$18,236,976	$16,397,105
Cash flow per common share	$5.00	$4.73

Source: General American Oil Company of Texas, 1963 Annual Report, p. 22.

December 31, 1963, was the strongest in its history. This strength reflects the Corporation's policy of utilizing substantial amounts of borrowed funds to supplement shareholder's investment. At year-end the ratio of long-term debt to net worth was approximately 1:1. This policy is practicable because of the Corporation's significant annual cash flow (net income, depreciation and depletion), which will provide adequately for retirement of debt, payment of cash dividends, better utilization

> of our timber reserves by continued expansion and modernization of plant and other facilities, and required increases in working capital to service our expanded needs.[23]

The "record of operations" section of the statistical summary for 1962 and 1963, as found in Georgia-Pacific Corporation's 1963 annual report, is presented in Table XVI.

Cash flow data are presented in other sections of Great Northern Paper Company's 1963 annual report, but the most notable display of cash flow is found in the statement of "source and disposition of working capital," which is covered by the auditors' opinion. Great Northern Paper Company's 1963 statement of "source and disposition of working capital" is presented in Table XVII.

The computation of cash flow in the "source and disposition of funds" statement in the 1962 report of Union Oil Company of California is somewhat different from traditional calculations. Rather than adding non-cash charges to net income to determine cash flow, the figure is computed by deducting cash expenses and costs from total revenues. It is interesting to note that non-cash charges plus net income does not equal the "cash flow from operations" figure as

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[23] Ibid., p. 7.

TABLE XVI
Georgia-Pacific Corporation
Record Of Operations
For Years Ended December 31

	1963	1962
Sales	$451,000,000	$379,000,000
Costs and expenses:		
Cost of sales & operating expenses	$380,420,000	$319,950,000
Interest	14,390,000	10,045,000
Local, state & federal taxes	27,650,000	24,140,000
	$422,460,000	$354,135,000
Net income for the year	$ 28,540,000	$ 24,865,000
Add--Non-cash expenses:		
Depreciation & amortization	19,280,000	15,915,000
Depletion	12,850,000	13,225,000
Net cash flow generated from operations	$ 60,670,000	$ 54,005,000
OTHER STATISTICS		
Per common share--		
Net income for the year*	$2.90	$2.58
Net cash flow generated from operations	$6.42	$5.73
Dividends--		
Cash paid per share outstanding	$1.00	$1.00
Adjusted*	$1.00	$0.96
Stock dividends paid	4%	4%
Stock splits	--	--
Shares of common stock outstanding*	9,436,945	9,414,149
Number of shareholders of record	35,220	24,579
Number of employees	18,940	18,993
RATIOS		
Net income as a % of equity investment	12.0%	11.5%
Net cash flow generated from operations as a % of sales	13.4%	14.2%
Inventory as % of sales	17.4%	21.1%
Working capital to inventories	1.14 to 1	1.15 to 1
Current assets to current liabilities	2.20 to 1	2.35 to 1
Cash to current liabilities	.43 to 1	.48 to 1

*Based on average number of shares outstanding for each year, including shares issued in pooling of interests, adjusted for all subsequent stock splits and stock dividends.

Source: Georgia-Pacific Corporation, 1963 Annual Report, p. 28.

TABLE XVII
Great Northern Paper Company
Source and Disposition of Working Capital
For Year Ended December 29, 1963

SOURCE:		
Cash flow--		
Net income for the year		$ 4,036,999
Provision for depreciation and depletion		5,219,922
Deferred Federal taxes on income--		
Resulting from the use of accelerated depreciation for tax purposes	$2,649,000	
Less: Reduced deferred taxes as a result of the excess of book depreciation over tax amortization of property covered by certificates of necessity	370,000	2,279,000
Investment credit		364,659
Cash flow		$11,900,580
Decrease in prepaid expenses, deferred charges, etc.		416,708
Funds provided		$12,317,288
DISPOSITION:		
Portion of long-term notes maturing in 1964		$ 2,475,000
Additions to plant and equipment, net		3,749,648
Dividends paid to stockholders		1,040,047
Funds used		$ 7,264,695
Increase in working capital		$ 5,052,593

Source: Great Northern Paper Company, 1963 Annual Report, p. 9.

shown in the funds statement. Although termed cash flow in the funds statement, the same figure is referred to as "cash

earnings" in the statistical summary section of the report.[24] The statement of "source and disposition of funds" as found in the report follows:

TABLE XVIII
Union Oil Company of California
Source And Disposition Of Funds
For Years Ended December 31

	1962	1961
	Thousand Dollars	
Total revenues	569,377	546,342
Less cash costs and expenses:		
Materials and services	247,073	250,506
Taxes	129,208	121,749
Salaries, wages and employee benefits	65,779	67,426
Interest	7,066	6,583
Cash flow from operations	120,251	100,078
Cash flow from public sale of Union of Canada stock		8,706
Less:		
Cash dividends declared	20,144	17,463
Capital expenditures	101,456	67,756
Debt retirement, miscellaneous investments, etc.	3,802	1,192
Increase (decrease) in working capital	(5,151)	22,373

Source: Union Oil Company of California, 1962 Annual Report, p. 15.

Graphic Presentations and Related Comments

Graphic presentations of cash flow data in the

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[24]Union Oil Company of California, 1962 Annual Report, pp. 15 and 22-23.

reports reviewed can be subdivided into five categories with respect to the information conveyed. The reports included charts which: (1) revealed the sources of cash flow (Figures III and IX), (2) demonstrated the uses of cash flow (Figures II and VI), (3) revealed both sources and uses (Figures IV and V), (4) compared cash flow to other financial data (Figure XII), and (5) simply presented total and/or per share cash flow (Figures VII, VIII, X and XI).

Most graphic presentations of cash flow data were in the financial review section, with only a few charts being shown in the president's letter and statistical summary sections. Most reports also contained some comments related to the graphic display of cash flow.

In addition to the graph presented in Figure II, Allegheny Ludlum Steel Corporation's 1963 report also mentions cash flow in discussing the division of each sales and revenue dollar as follows:

> ...Of the total cash flow amounting to 7.5 cents made up of net earnings and depreciation, 4.5 cents were provided for reinvestment in the business.[25]

---

[25]Allegheny Ludlum Steel Corporation, 1963 Annual Report, p. 7.

The 4.5 cents "provided for reinvestment in the business" in the preceeding quotation was determined by subtracting 3.0 cents from the total cash flow, the 3.0 cents being the portion of the sales and revenue dollar which was paid out in dividends.[26]

The 1962 report of Coastal States Gas Producing Company contains a graphic presentation of cash flow in the highlights as well as the financial review section. Figure III shows the chart appearing in the financial review section. Total and per share cash flow figures were also included as a part of the president's letter and statistical review sections of the report.

The only reference to cash flow in Consolidated Foods Corporation's 1961 report was a chart (Figure IV) revealing the sources and uses of cash flow. The same type of chart (Figure V) was presented in the 1962 report of Consolidated Foods Corporation in addition to references to cash flow in the highlights and statistical summary sections. The financial review section of the 1962 report included the following discussion of cash flow relating to the chart

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[26] Ibid.

and cash flow data in other parts of the report:

> The amount of cash generated by profits plus depreciation is a vital factor in the financial growth of any company. The chart...sets out the 10 year record of Consolidated's cash flow, and a comparison with funds expended for capital improvements.
>
> Because of the importance of the cash flow factor, a historical comparison of this item termed "cash net income per share," has been included in the 10-year summary... As used in this statement, "cash net income per share" means the sum of net earnings after taxes, plus depreciation deducted from earnings, divided by the number of shares outstanding.[27]

Besides Figure VI, which appears in the 1963 report of Continental Oil Company, cash flow is discussed in the financial review section and total figures are presented in the statistical summary section. The following comments appear under the heading "source of funds" in the financial review section:

> In 1963, Continental's principal source of funds consisted of net cash earnings and an increase in long-term debt.
>
> Net cash earnings for Continental and consolidated subsidiaries in 1963 totaled $212.4 million, a 13.7% increase over net cash earnings of $186.8 million generated in 1962. Net cash earnings are earnings remaining after deducting from total revenues the out-of-pocket costs of running the

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[27]Consolidated Foods Corporation, 1962 Annual Report, p. 5.

> business, but before deducting such non-cash costs as amortization, depreciation, depletion, surrendered leases and dry hole costs.[28]

Per share cash flow is mentioned in the letter to shareholders section of Crane Company's 1961 annual report and presented in graphic form (Figure VII) in the statistical summary section.

In addition to a chart (Figure VIII), the 1961 report of Gulf Oil Corporation contains the following statements pertaining to cash flow:

> Cash funds generated from operations were $582,064,000, down less than 1% from 1960. These funds were more than adequate to cover cash requirements.[29]

The financial review section of Lone Star Cement Company's 1963 report contains a rather lengthy discussion of cash flow as well as a graphic display (Figure IX) of cash flow data. The following selected comments from the report explain the nature, uses and limitations of cash flow:

> Depreciation and depletion charges are included with net income in computing cash flow since they principally represent the amortization of prior years'

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[28]Continental Oil Company, 1963 Annual Report, pp. 29-30.

[29]Gulf Oil Corporation, 1961 Annual Report, p. 21.

> expenditures for fixed assets and, therefore, are not cash disbursements of the current year.
>
> Funds recovered through depreciation and depletion charges may be used to replace worn-out plants, machinery and other properties--but management has the responsibility of deciding when to replace those worn-out facilities and whether to replace them with similar or dissimilar assets.
>
> This latitude of judgement applies also, of course, to the investment of retained earnings--the profits that are plowed back into the business.
>
> The significance of total cash flow, therefore, is that it constitutes a useful measure of the reinvestment power of a company--its ability to modernize, expand, diversify, or otherwise adapt itself to the needs of the times.
>
> The danger of this cash flow concept is the possible misconception that depreciation reserves can be spent for higher salaries, or wages, or dividends. This is not true, of course, unless a company is to be liquidated. Depreciation and depletion funds must be reinvested, in one way or another, if the business is to continue beyond the life of its original machinery.[30]

Cash flow information is included in the highlights, financial review and statistical summary sections of the 1963 annual report of Owens-Illinois Glass Company. Cash flow data appears in two different forms in the financial review section: (1) total and per share figures in graphic form (Figure X), and (2) total cash flow as one of the intermediate totals in the statement of "source and application of working capital."

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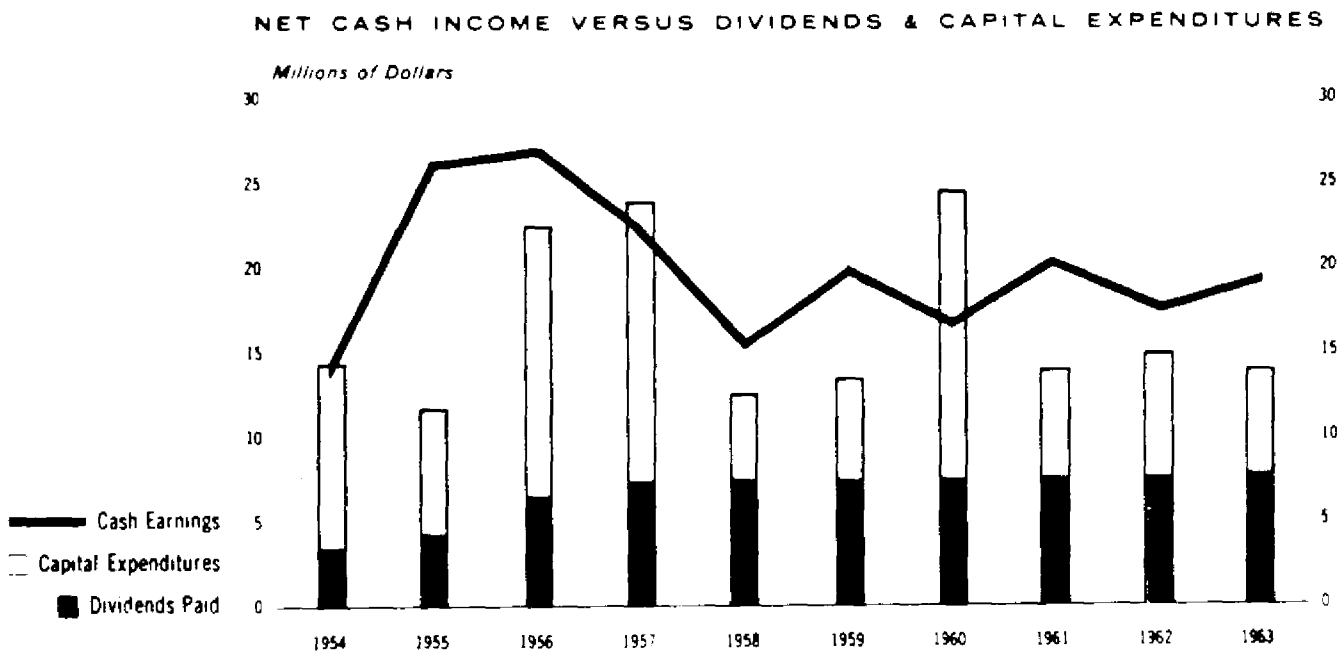
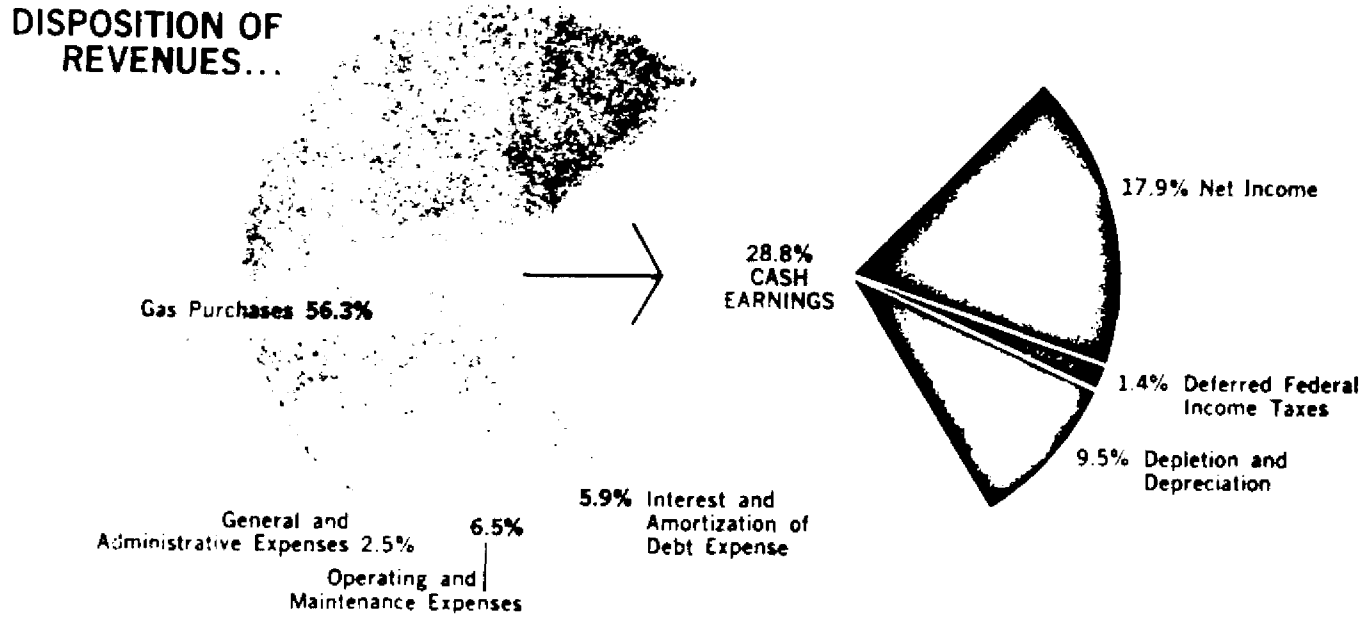
[30]Lone Star Cement Corporation, 1963 Annual Report, pp. 5-6.

Figure II
Allegheny Ludlum Steel Corporation
Cash Earnings, Capital Expenditures and Dividends Paid
For Years 1954 Through 1963



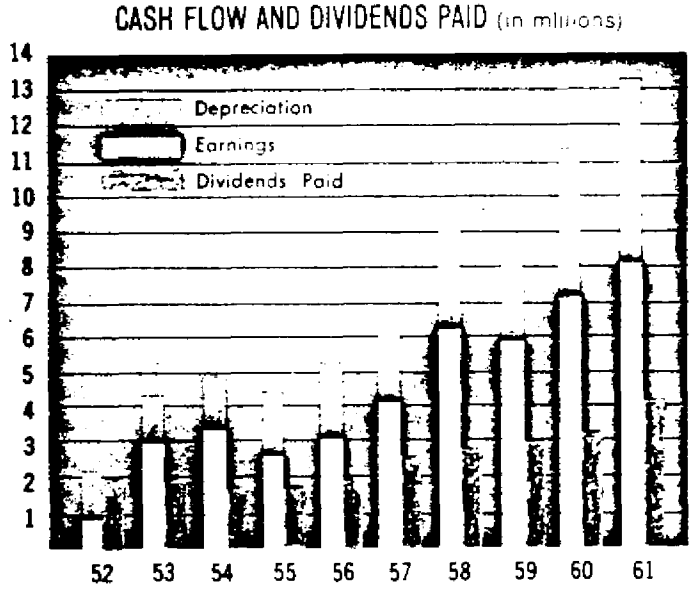
Source: Allegheny Ludlum Steel Corporation, 1963 Annual Report, p. 6.

Figure III
Coastal States Gas Producing Company
Disposition of Revenues
For Fiscal Year Ended June 30, 1962



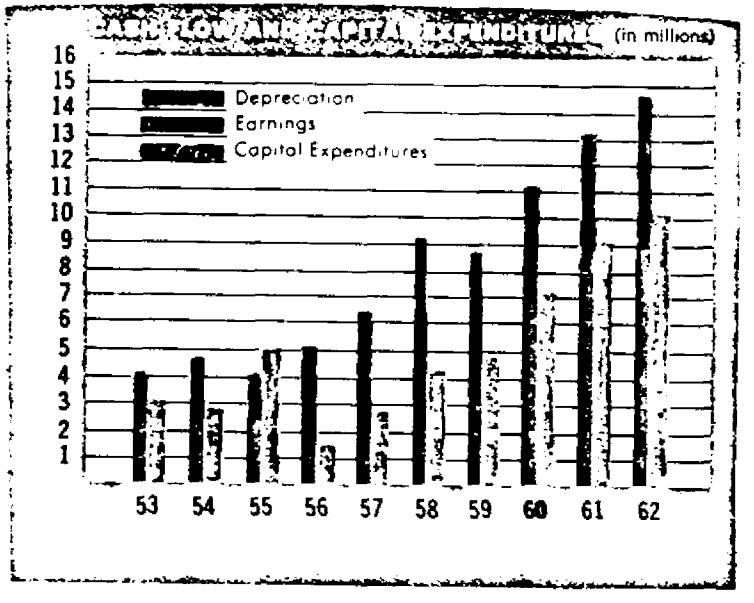
Source: Coastal States Gas Producing Company, 1962 Annual Report, p. 5.

Figure IV
Consolidated Foods Corporation
Cash Flow and Dividends Paid
For Years 1952 Through 1961



Source: Consolidated Foods Corporation, 1961 Annual Report, p. 3.

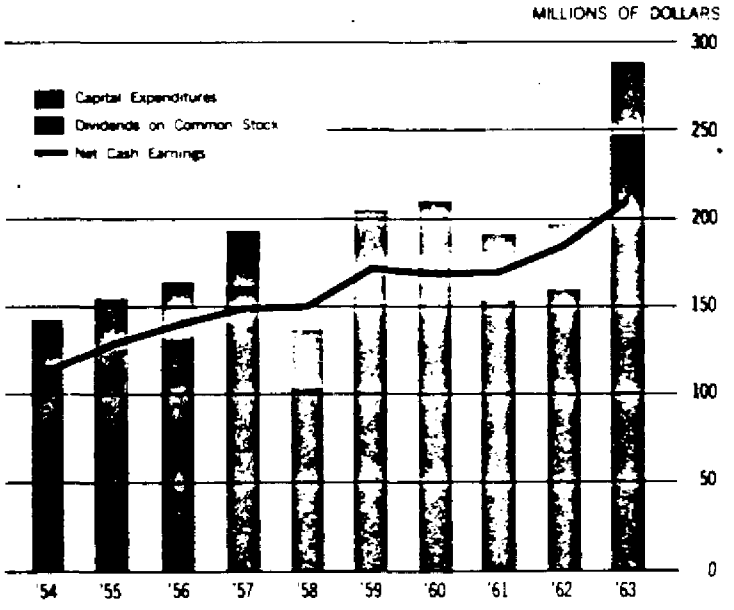
Figure V
Consolidated Foods Corporation
Cash Flow and Capital Expenditures
For Years 1953 Through 1962



Source: Consolidated Foods Corporation, 1962 Annual Report, p. 6.

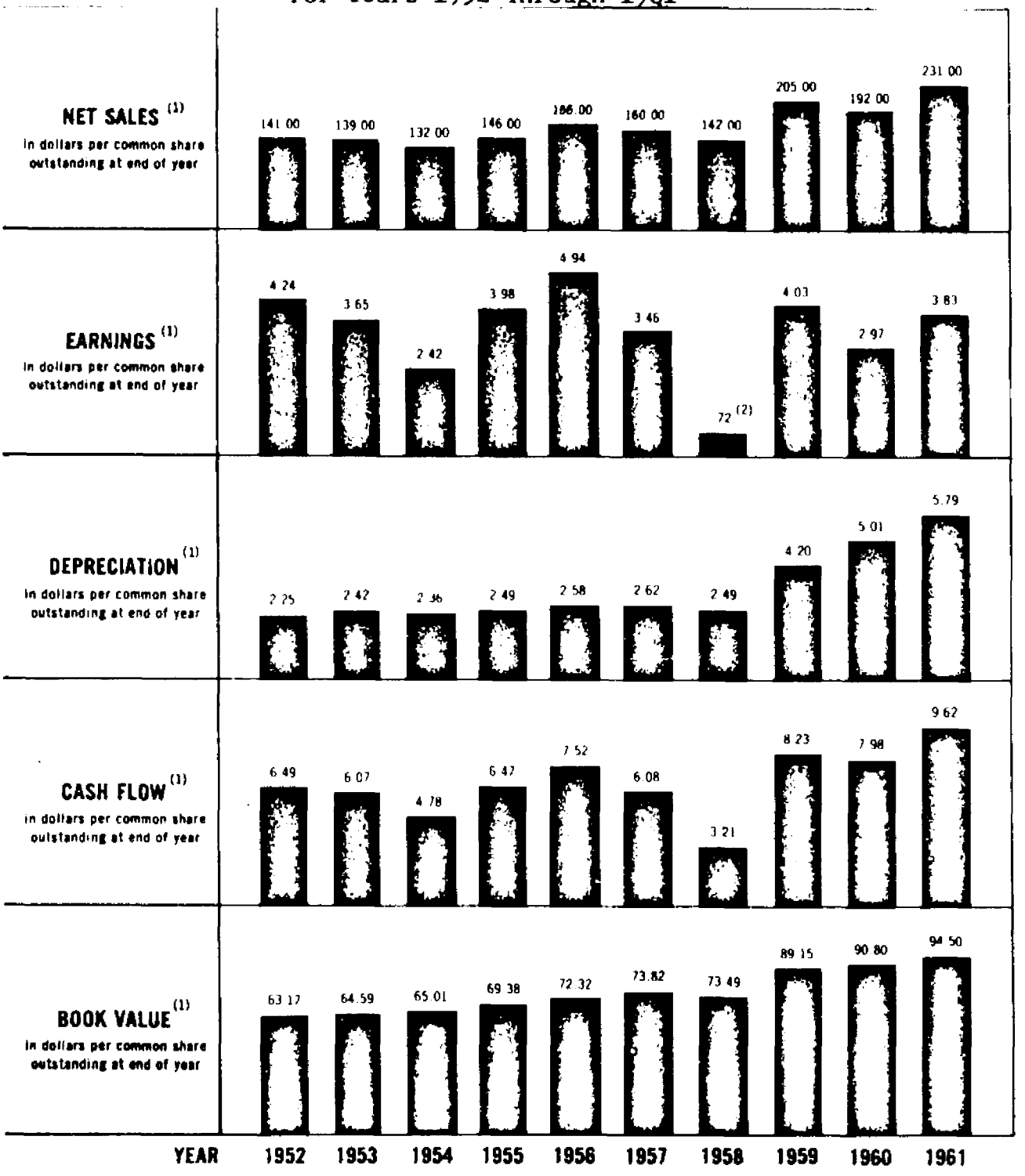
Figure VI
Continental Oil Company
Cash Flow, Capital Expenditures and Dividends
For Years 1954 Through 1963

CASH FLOW,
CAPITAL EXPENDITURES
AND DIVIDENDS



Source: Continental Oil Company, 1963 Annual Report, p. 29.

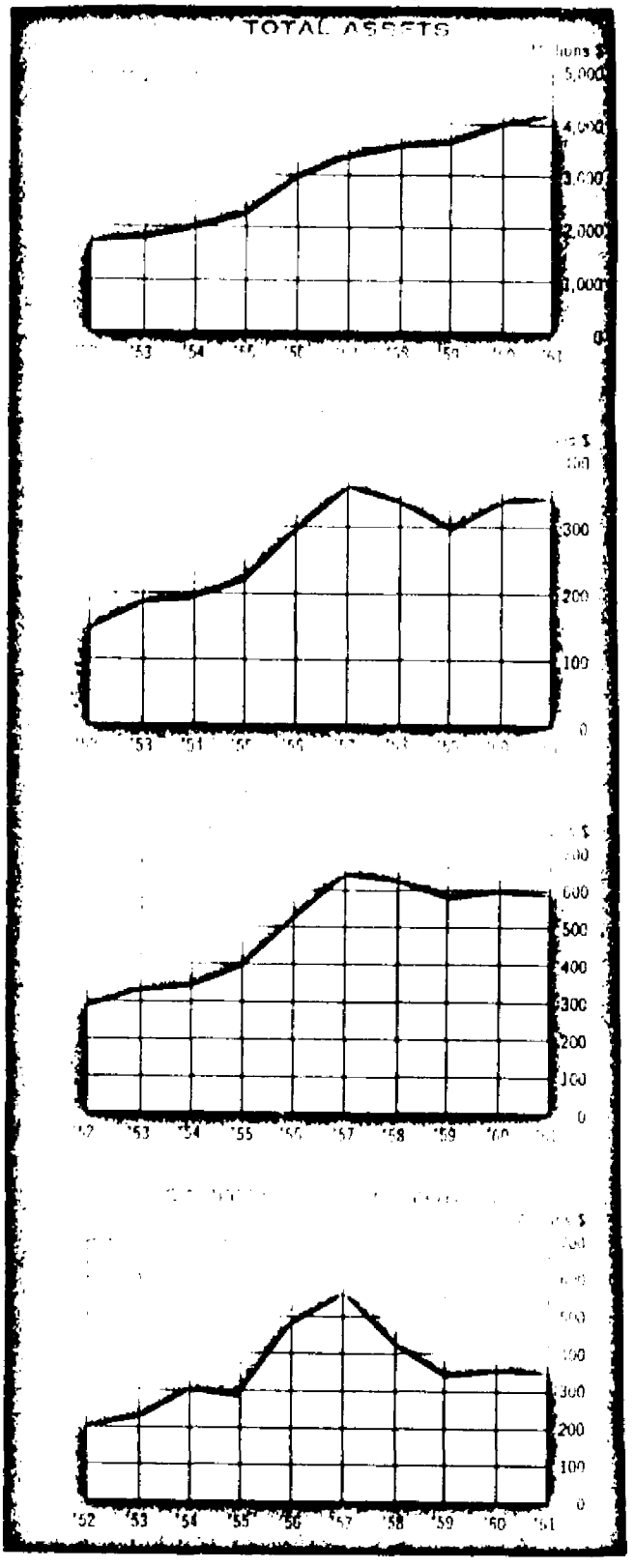
Figure VII
Crane Company
Ten Year Summary of Operations
For Years 1952 Through 1961



(1) Years 1952 to 1956 have been recalculated to provide comparability with later years.
(2) After deducting extraordinary loss, net of income tax refund $3,308,000 or $1.40 per share.

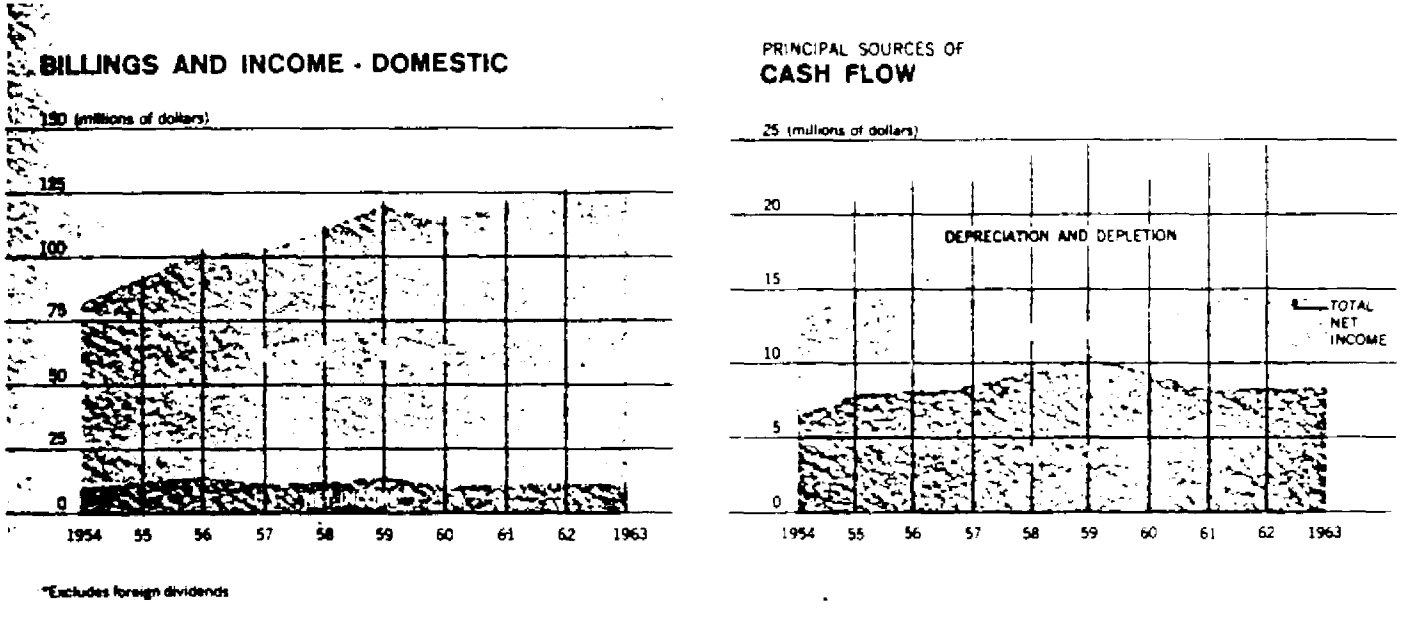
Source: Crane Company, 1961 Annual Report, p. 9.

Figure VIII
Gulf Oil Corporation
Total Assets, Cash Income, Net Income and Capital Expenditures
For Years 1952 Through 1961



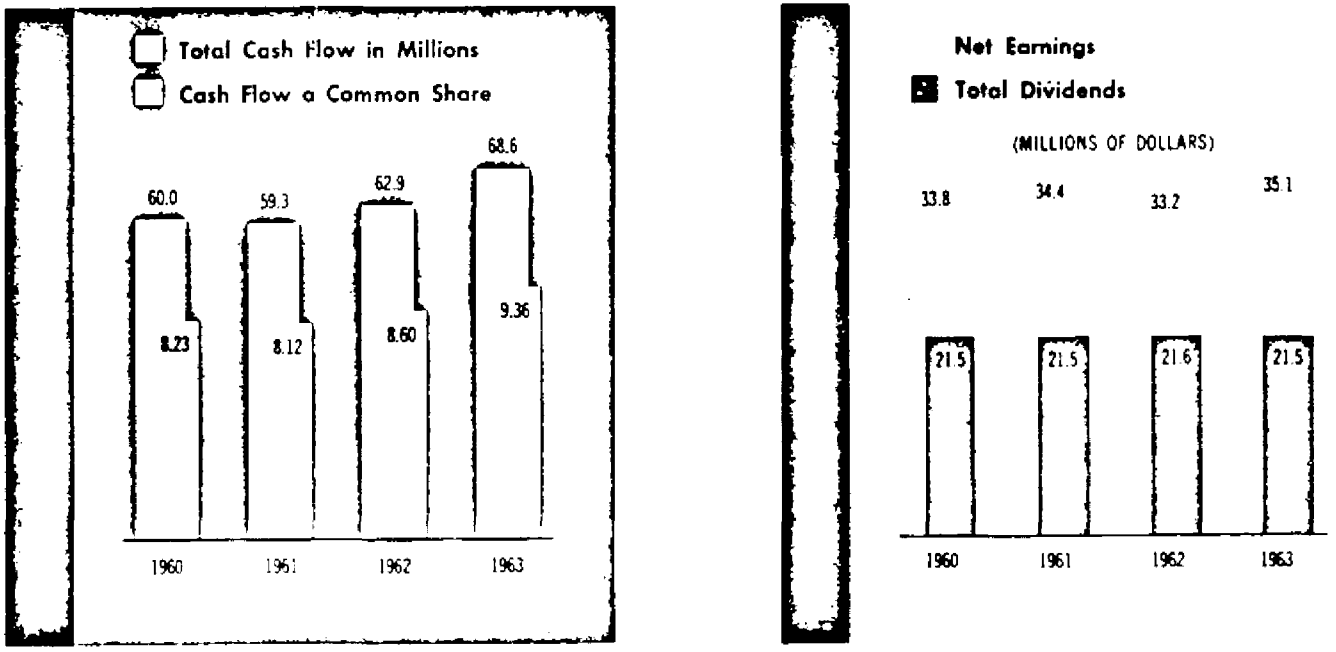
Source: Gulf Oil Corporation, 1961 Annual Report, p. 20.

Figure IX
Lone Star Cement Corporation
Billings, Net Income and Cash Flow
For Years 1954 Through 1963



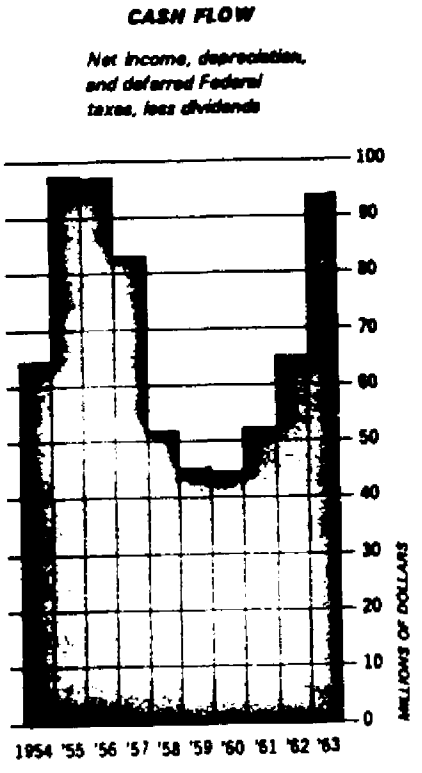
Source: Lone Star Cement Corporation, 1963 Annual Report, p. 6.

Figure X
Owens-Illinois Glass Company
Cash Flow, Net Earnings and Dividends
For Years 1960 Through 1963



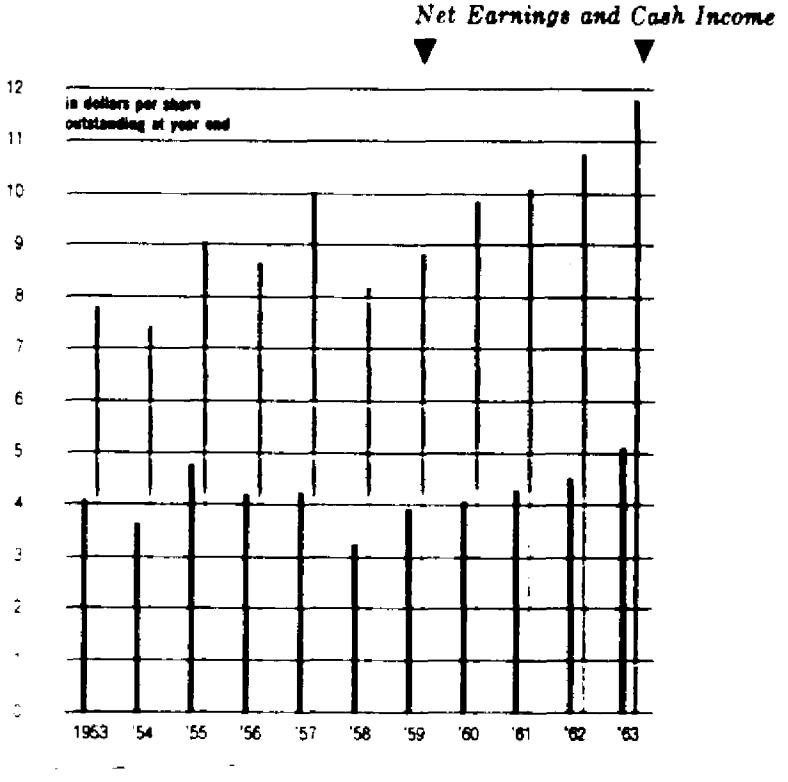
Source: Owens-Illinois Glass Company, 1963 Annual Report, p. 17.

Figure XI
Republic Steel Corporation
Cash Flow
For Years 1954 Through 1963



Source: Republic Steel Corporation, 1963 Annual Report, p. 8.

Figure XII
Standard Oil Company (Indiana)
Net Earnings and Cash Income
For Years 1953 Through 1963



Source: Standard Oil Company (Indiana), 1963 Annual Report, p. 5.

Cash flow data in the 1963 report of Republic Steel Corporation was limited to a graphic display (Figure XI) of total and per share figures for a four year period.

In addition to a chart (Figure XII), appearing in the financial review section, the 1963 report of Standard Oil Company (Indiana) contains numerous references to cash flow, including the following comments in the letter to shareholders:

> ...Cash income--the sum of net earnings and charges against earnings for depreciation, depletion, amortization, retirements, and abandonments--was $11.83 per share. It was $10.79 per share in 1962.[31]

Desirability of Cash Flow Data in Annual Reports

Comments on Presentations in Reports Reviewed

Only a few of the reports reviewed in this study presented cash flow in a manner which made it easy to understand just what cash flow is and what significance such data has to the company. No one method of presentation (brief comments only, tabular presentations and related

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[31]Standard Oil Company (Indiana), 1963 Annual Report, p. 2.

comments, graphic presentations and related comments) could be said to be the most desirable. The important question is not the method employed but whether presentations define cash flow and explain its significance in a manner which does not mislead the reader into thinking that cash flow is something other than working capital produced by operations. Including cash flow data in annual reports without properly defining the term and its significance should be avoided since the term cash flow has been used to designate a number of concepts and has been given different meanings when applied to the same concept.

Cash flow presentations in those annual reports which limited cash flow data to brief comments were inadequate. The term cash flow, or other terms used to designate the cash flow concept, was not defined in some cases (the 1963 reports of Commercial Solvents Corporation and General Cable Corporation). Although the brief comments in some reports (the 1962 reports of Koppers Company, J. P. Stevens and Company, and The Youngstown Sheet and Tube Company; and, the 1963 reports of Johns-Manville Corporation, and Monsanto Chemical Company) included a definition of cash flow, the information presented was not sufficient to enable the reader to understand the significance of cash flow. Misleading

comments in some reports (the 1962 report of Molybdenum Corporation of America, and the 1963 reports of American Machinery and Foundry Company and Ex-Cell-O Corporation) are less desirable than those which either did not define or lacked an explanation of the significance of cash flow. The reports mentioned in the preceeding sentence include statements which indicate that cash flow is the amount of cash produced by operations; but, as explained in Chapter IV, there is no relationship between these two figures.

With respect to the reports which presented cash flow data in tabular form and included comments pertaining to cash flow, the 1963 reports of two companies (Acme Steel Company and Great Northern Paper Company) demonstrate what cash flow actually is and reveal what significance the figure has to the company. Much the same thing could be said of the other reports displaying cash flow data in tabular form as was mentioned in connection with those reports which limited cash flow information to brief comments. That is, not enough information was revealed to enable the reader to understand what cash flow means to the company, or misleading comments were included which rendered the data less than uninformative.

Of the reports using charts and related comments to

present cash flow data, only two were satisfactory. The 1963 reports of Lone Star Cement Corporation and Owens-Illinois Glass Company present enough data to enable the reader to understand what cash flow is and what it means to the company.

Defining Responsibilities

Although the public accountant's function is one of auditing in order to render a professionally competent opinion as to the fairness of financial statements, the financial statements included in corporate annual reports are always management representations. The American Institute of Certified Public Accountants has emphasized the responsibilities of management and the independent auditor as follows:

> ...The transactions with which the accounting records have to do and the recording of those transactions in the books and accounts are matters within the direct and primary knowledge of the company. The independent auditor's knowledge of them is a secondary one, based on his examination. Accordingly even though the form of the statements may show the influence of the accountant--the substance of the financial statements of necessity constitutes the representations of the company. The independent auditor's representations, therefore, are confined to and expressed in his report, or opinion, upon the statements...[31]

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[31]American Institute of Certified Public Accountants--Committee on Auditing Procedure, Codification of Statements on Auditing Procedure, (New York, 1951), p. 12.

Recommendations

Accountants, even though not primarily responsible for financial statements and other data in corporate annual reports, should be vitally concerned with any presentations of data which tend to discount information on which an opinion has been rendered. Information, including cash flow, in other sections of annual reports which detracts from the significance of the audited financial statements should be discouraged since the auditor's standing as an independent expert is questioned by such presentations.

As a whole, there is no reason to exclude cash flow data from annual reports. Cash flow, if properly displayed and interpreted, can be useful in revealing the working capital provided by operations. However, cash flow data should not be presented in a manner which would tend to detract from the net income figure as reported in the audited financial statements. Perry Mason has pointed out that "there is a real danger that the reader will interpret the cash flow earnings as the real earnings and fail to comprehend the significance of the net income figure."[32] Some misunder-

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[32]Perry Mason, "Cash Flow" Analysis and The Funds Statement, Research Report No. 2, (New York: American Institute of Certified Public Accountants, 1961), p. 41.

standing could be avoided by making the funds statement a part of the financial statements upon which the auditor renders an opinion. Cash flow could be properly displayed and explained either in the funds statement itself or in notes thereto.

Use of terms such as "cash earnings" and "cash income" to designate cash flow should be avoided. Although cash flow is not a very descriptive term, its use is preferable to others which imply that the cash flow figure is the difference between operating receipts and expenditures. As demonstrated in Chapter III, the total of accrual net income and non-cash charges does not necessarily equal cash generated by operations.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Purpose And Scope Of Study

The purpose of this study was to investigate the assumptions underlying the cash flow concept and to determine its uses and limitations as a tool of financial analysis. Cash flow, as used in financial analysis, is defined as accrual net income plus items deducted from revenue on the income statement which did not involve the disbursement of cash during the current period. Although the term cash flow has been (and is being) employed to designate other concepts, no attempt was made to investigate any use of the term other than its current application in the field of financial analysis.

Cash Flow Controversy

Cash flow has been discussed widely in accounting and financial periodicals in recent years. Security analysts are given credit for the development of the concept and have used cash flow as a substitute for, or as a supplement to,

accrual net income. Analysts explain the desirability of cash flow by pointing to the lack of comparability of the operating results of companies as presented by accountants in income statements. Since some of the most important differences between income statements result from the different ways in which the non-cash items are treated by various companies, it is suggested that by eliminating the non-cash items a more valid comparison of operating results can be made. Accountants have used a concept similar to cash flow in preparing a "source and application of funds" statement for some time but have objected to the use of cash flow as a substitute for net income in judging enterprise progress.

Accounting Income Determination

The accountant determines net income while working within a framework provided by certain concepts and assumptions. Earnings for a particular period are computed by subtracting expired costs from revenues, and the accountant must decide when revenues are to be recognized as earned and when costs expire. Accountants generally agree that a proper matching of revenues and expenses requires the use of the accrual basis and that a mere matching of cash receipts and disbursements for a period does not reveal the operating results of that period.

Non-Cash Charges As Deductions From Revenues

Depreciation accounting attempts to recognize as expense the net cost (original cost less salvage) of tangible fixed assets over the periods which benefit from asset use. The aim in accounting for other non-cash charges, depletion and amortization, is the same as that of depreciation accounting with the only difference being the type of asset to which the charges apply.

The amount of non-cash charges may be radically different from the cash expenditures made to acquire the items upon which the charges are based during a particular period since these charges may relate to expenditures made in past periods, the current period, outlays that will be made in future periods, or some combination thereof. Although non-cash charges may not be represented by cash expenditures in the same period in which they appear as deductions from revenue, the fact remains that when the assets upon which such charges are based were acquired an outlay of cash or its equivalent was necessary.

Complete objectivity in the computation of the amount of non-cash charges is not possible since the useful lives of assets (number of recoverable units in connection with

natural resources) and the amount that will be realized upon final disposition are necessarily estimates. Only by investigating thoroughly the circumstances of individual companies can an informed decision be reached on the reasonableness of the amounts deducted for non-cash items.

Lack of complete objectivity and the fact that there may be no correspondence between non-cash charges for the period in question and cash outlays do not justify the exclusion of depreciation, depletion and amortization from the computation of operating results. Similar arguments could be given for the elimination of other deductions from revenue (cost of goods sold, for example); but, if all of these items were omitted the result obtained could not be meaningful.

The difference in treatment received by non-cash charges between the cash flow concept and accounting practices is not one of timing since there would never be a deduction for such items in the determination of cash flow. Depreciation and other non-cash items are as much a cost of operations as those deductions from revenue for which cash expenditures are made more or less regularly. Cash flow, therefore, could not be considered to measure accurately the operating results of an entity and should not be used as a substitute for properly determined net income.

Non-Cash Items And Funds Provision

Cash flow data may be employed profitably in financial analysis as a supplement to net income since the earnings reported on income statements do not reveal the funds provided by operations. Net income adjusted for non-cash transactions reveals the amount of working capital provided by operations.

Regardless of the definition of funds employed, it is obvious that revenues are the only source of operating funds and that the act of recording depreciation and other non-cash items could not provide funds. For a number of years accountants have, however, adjusted net income by the amount of the non-cash items for a period to determine "funds provided by operations" as a short-cut to the method of calculating operating funds provision by subtracting those items which required an outflow of funds from revenues.

In a limited sense and with a definition of funds in use which includes inventories (other than total resources), the recording of non-cash charges could be said to "create" funds. The amount of funds "created" is the total charge transferred to inventory accounts during the period, and the "creation" is the result of transferring a part of the cost of assets not included in the definition of funds to inventory.

Cash Flow And Changes In The Cash Balance

Even though cash flow is positive and no cash outlay was made for non-cash charges during the period, the total cash flow does not represent an increase in the cash balance. In fact, there may not have been an increase in cash. It is also improper to assume that total depreciation, depletion and amortization for the period represents an increase in the cash balance. Factors other than cash flow, managerial decisions being one, determine the change in cash as well as other balance sheet accounts. There are numerous possibilities as far as the effect operations can have on balance sheet accounts, ranging all the way from the total change being reflected in an individual asset or liability account (including an increase in cash) to the change being reflected in a combination of asset and liability accounts.

Cash Flow In Common Stock Investment Decisions

In addition to the use of cash flow as a substitute for and/or a supplement to properly determined net income, cash flow data have been employed in a number of ways in common stock investment decisions. The applications of cash flow, other than as a substitute for or supplement to net

income, in investment decisions include: (1) a tool for estimating dividend potential, (2) a growth measurement, and (3) a device upon which probable future stock price projections are based. Cash flow does not operate equally well in all applications. For example, it has been mentioned previously that cash flow does not measure operating results and should not be used as a substitute for net income, but the figure does represent working capital provided by operations and is an appropriate supplement to net income as a concept which reveals the effect of operations on balance sheet accounts.

Cash flow may be profitably employed in estimating future dividend potential. In the past dividends have borne a more constant relationship to cash flow than to earnings. The fact that dividend payout has been relatively constant as a percentage of cash flow indicates that a projection of dividends based on cash flow should be more reliable than one based on earnings.

The usefulness of cash flow as a growth measurement is questionable. If total cash flow increases there is no doubt that some type of growth is present. Whether the growth is desirable depends upon which of the factors comprising cash flow, net income or non-cash charges, is

responsible for the increase. An expansion entirely attributable to larger non-cash charges does not indicate an advantageous growth since larger non-cash charges may simply indicate a larger amount invested in assets without a corresponding increase in productive capacity. An increase attributable solely to net income or comparable growth in both factors comprising cash flow would represent advantageous growth. Total cash flow, however, gives no indication of the relative increment or decrement in the two quantities.

The use of cash flow as a tool for projecting future prices of stocks is of relatively recent origin. Sufficient time has not elapsed to determine the effectiveness of cash flow as a predictor of stock prices. After lapse of sufficient time, further research in this area is needed.

Cash Flow Data In Annual Reports

In recent years cash flow data have increasingly become a part of corporate annual reports, both in terms of the number of companies including cash flow information in their reports and the number of report sections in which data pertaining to cash flow appears.

As a part of this study the annual reports of 75 corporations for the years 1961, 1962 and 1963 were reviewed. The primary purpose of this segment of the study was not to

reveal the prevalence of cash flow data in annual reports but to demonstrate the different methods of presentation employed and to investigate the desirability of information pertaining to cash flow in annual reports.

The reports which contained cash flow data can be divided into three groups on the basis of the manner in which the information was presented: (1) those in which cash flow data is limited to brief comments, (2) those in which cash flow data is presented in tabular form accompanied by related comments and (3) those which displayed cash flow in graphic form with related comments. No one method could be said to be the most desirable. The important thing, regardless of which method of presentation is employed, is to define the term cash flow and to reveal the significance of the data to the company. The wide variety of meanings given to the term cash flow when used to designate a particular concept (net income plus non-cash charges, for example) and the variety of concepts for which the term has been used makes a complete definition and description necessary.

Most presentations in the reports reviewed either did not reveal what cash flow is or did not demonstrate what significance such data has to the company. Some reports exhibited cash flow data in a manner which misleadingly

implied that cash flow is something other than working capital provided by operations. For example, terms used in some reports--cash earnings and cash income--erroneously indicate that the figure represents earnings computed on a cash basis. The term cash flow does not adequately describe the information to which it is applied in financial analysis, but its use is preferable to others which indicate that the figure represents income on a cash basis.

Some presentations of cash flow data tend to detract from the financial statements upon which the auditor has rendered an opinion by implying that cash flow is an earnings figure. In order to avoid this, the accountant should assume the responsibility for revealing the true significance of cash flow. The accountant could meet this responsibility by making the funds statement a part of the audited financial statements, the funds statement properly displaying and explaining cash flow.

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Armco Steel Corporation

Ashland Oil and Refining Company

Brunswick Corporation

Champion Spark Plug Company

Cities Service Company

Coastal States Gas Producing Company

Colgate-Palmolive Company

Commercial Solvents Corporation

Consolidated Foods Corporation

Continental Oil Company

Crane Company

Deere and Company

Dow Chemical Company

Dresser Industries, Incorporated

Ex-Cell-O Corporation

F M C Corporation

Ford Motor Company

Freeport Sulphur Company

Fruehauf Corporation

General American Oil Company of Texas

General Cable Corporation

General Electric Company

General Motors Corporation

General Tire and Rubber Company

Georgia-Pacific Corporation

Great Northern Paper Company

Gulf Oil Company

Ingersoll-Rand Company

International Paper Company

Johns-Manville Corporation

Kennecott Paper Company

Kern County Land Company

Koppers Company, Incorporated

Lone Star Cement Corporation

Midwest Oil Corporation

Minnesota Mining and Manufacturing Company

Molybdenum Corporation of America

Monsanto Company

National Lead Company

Owens-Illinois Glass Company

Pennsalt Chemicals Corporation

Phelps Dodge Corporation

Phillips Petroleum Company

Pure Oil Company

Rayonier, Incorporated

Republic Steel Corporation

Reynolds Metals Company

Richfield Oil Corporation

S. S. Kresge Company

Standard Oil Company (Indiana)

Standard Oil Company (Ohio)

J. P. Stevens and Company, Incorporated

Sunray DX Oil Corporation

Sun Oil Company

Superior Oil Company

Texaco, Incorporated

Thompson Ramo Wooldrige, Incorporated

Union Bag-Camp Corporation

Union Oil Company of California

United Gas Corporation

United States Gypsum Company

United States Steel Corporation

Westinghouse Electric Corporation

Wheeling Steel Corporation

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James E. Dear, son of Mr. and Mrs. Wheelis B. Dear, was born in Mangham, Louisiana, on August 9, 1934. He attended public schools of Franklin and Ouachita Parishes and was graduated from Ouachita Parish High School in June, 1952. He served in the United States Marine Corps from September, 1952, until September, 1955. He enrolled in Northeast Louisiana State College in February, 1956, and in June, 1959, he received his Bachelor of Science degree with a major in business administration. In June, 1959, he enrolled in the Graduate School of Louisiana State University and received his Master of Business Administration degree with a major in accounting in January, 1961. He continued in the Graduate School of Louisiana State University until September, 1963, at which time he became Assistant Professor of Accounting at Northeast Louisiana State College. He is now a candidate for the Doctor of Philosophy degree in the Department of Accounting.

EXAMINATION AND THESIS REPORT

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Major Field: Accounting

Title of Thesis: CASH FLOW IN FINANCIAL ANALYSIS AND ITS IMPLICATIONS

Approved:

James M. Owen
Major Professor and Chairman

Max Goodrich
Dean of the Graduate School

EXAMINING COMMITTEE:

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Date of Examination:

January 18, 1965